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R. Boas  
Chief Admin. Officer

Department of Public Works

# Annual Report

City and County of San Francisco

1976 ~ 1977



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# **ANNUAL REPORT**

OF THE

## **DEPARTMENT OF PUBLIC WORKS**

## **CITY AND COUNTY OF SAN FRANCISCO**



**JUNE 30, 1977**

★  
**GEORGE R. MOSCONE**  
MAYOR

**ROGER BOAS**  
CHIEF ADMINISTRATIVE OFFICER

**S. MYRON TATARIAN**  
DIRECTOR OF PUBLIC WORKS

★

COMPILED & DESIGNED BY WALTER M. LOO, BUREAU OF ENGINEERING  
ASSISTANT • PATRICIA ROHRBACK

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**MAYOR**  
**GEORGE R. MOSCONE**

**CHIEF  
ADMINISTRATIVE  
OFFICER**  
**ROGER BOAS**

**DIRECTOR**  
**S. MYRON TATARIAN**

**DEPARTMENT OF  
PUBLIC WORKS**  
**CITY AND COUNTY OF  
SAN FRANCISCO**  
JUNE 30, 1977  
ORGANIZATION CHART

**ASSISTANT TO THE  
DIRECTOR**  
**JOHN E. CRIBBS**

**BUREAU OF  
ENGINEERING**  
**CITY ENGINEER AND  
DEPUTY DIRECTOR**  
**JEFFREY LEE**

**BUREAU OF  
ARCHITECTURE**  
**CITY ARCHITECT**  
**NORMAN KARASICK**

**BUREAU OF  
SANITARY  
ENGINEERING**  
**CHIEF SANITARY ENGR.**  
**ALAN O. FRIEDLAND**

**BUREAU OF  
BUILDING INSPECTION &  
PROPERTY CONSERVATION**  
**SUPERINTENDENT**  
**ROBERT C. LEVY**

**CENTRAL PERMIT  
BUREAU**  
**SUPERVISOR**  
**NORMAN MACHOL**

**BUREAU OF WATER  
POLLUTION  
CONTROL**  
**SUPERINTENDENT**  
**JOHN CRAFTS**

**BUREAU OF  
STREET REPAIR**  
**SUPERINTENDENT**  
**GORDON D. SPEARS**

**BUREAU OF  
BUILDING  
REPAIR**  
**SUPERINTENDENT**  
**JOHN S. RUTHERFORD**

**BUREAU OF  
STREET CLEANING  
AND PLANTING**  
**SUPERINTENDENT**  
**BERNARD M. CROTTY**

**GENERAL  
OFFICE**

**BUREAU OF  
ACCOUNTS**  
**SUPERVISOR**  
**RON SMALL**

**PERSONNEL  
ADMINISTRATION**  
**SUPERVISOR**  
**ALBERT C. AMBROSE**





CITY AND COUNTY OF SAN FRANCISCO  
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE  
DIRECTOR OF PUBLIC WORKS

February 3, 1978

200 CITY HALL  
SAN FRANCISCO  
CALIFORNIA 94102  
(415) 586-3071

Mr. Roger Boas  
Chief Administrative Officer  
Room 289 City Hall  
San Francisco

Dear Mr. Boas:

I am pleased to submit herewith, in accordance with the provisions of Section 3.501 of the Charter of the City and County of San Francisco, the Annual Report of the Department of Public Works for the fiscal year ending June 30, 1977.

The regular departmental budget for the year totaled some \$43,553,000 which was derived mainly from general funds and gas taxes. The amount actually expended was \$38,780,000 which did not include large encumbrances being disbursed, but not yet finalized, for capital improvements. These amounts were also exclusive of fundings and expenditures from bond sources and federal and state grants.

During the past year, the Department awarded 236 public contracts for construction and services estimated to cost approximately \$75,400,000 worth of work.

Private building activity was at an increased rate with 12,135 permits issued but dollar amount of construction was down to \$206,400,000. These figures, compared with those of the previous year, represented an increase of about 11% and a decrease of 27% respectively.

In addition to performing our routine functions, the Department expended special efforts in several high public impact activities as follows:

Advanced the design and construction of the Wastewater Management Plan by awarding four contracts in the amount of \$32,000,000 for large sewer construction on the north and east sides of the City, to consolidate outfalls into the bay and to store wastewater during the rainy season; awarded a contract for \$13,000,000 for a pump station which was 22 percent constructed as of June 30, 1977 and completed design work for \$382 million worth of new construction.

Instituted the Rehabilitation Assistance Program (RAP) in the Inner Richmond in December 1976 and the Upper Ashbury in April 1977. This is a program of bringing all structures in a designated area up to code standards through low interest loans. The program took five years of planning with state and federal agencies, the Bank of America and City officials.

Began early in 1977 joint inspections with the Fire Department of all high rise buildings over 75 feet in height to comply with state retroactive requirements promulgated by the State Fire Marshal.

Began studies in two areas for implementation of preferential parking in residential areas which was adopted by the Board of Supervisors in August 1976. The program would limit parking on residential streets in a legislated area to two hours except that residents in the area could purchase an annual permit for \$10 which would permit unlimited parking.

Continued the mechanical streetweeping/controlled parking program by expanding operations into two new areas north and south of Market Street in the downtown area. These areas are swept at night. Plans were being finalized and public hearings were held for beginning the program in the Outer Mission, the Excelsior and the Crocker-Amazon districts.

Prepared applications for construction and renovation projects for the federally-funded 1976 and 1977 Local Public Works Capital Development Program. The City received funding for two projects from the 1976 funding in the amount of \$5.2 million for renovation of Clarendon Hall at Laguna Honda Hospital and for a Wolf Woods Exhibit at the Zoo. Ten projects totaling \$18.5 million were submitted for the 1977 funding phase with the expectation that all would be funded. In addition, we received \$1.5 million from the Federal Public Works Act Title II Program to hire personnel and undertake deferred maintenance on public buildings. We had 48 positions filled and working under this program on June 30, 1977.

The Department had many retirements during the year of employees with long-time service. Two of the retirees from top management were Alfred Goldberg, Deputy Superintendent and later Superintendent of Building Inspection, with 27 years of service and Brian Fewer, Supervisor of Street Tree Planting after 36 years of service. In addition, Albert Ambrose, the Departmental Personnel Officer for 13 years, accepted a promotion to the Civil Service Commission on March 16, 1977.

My staff, the Bureau Heads, their staffs and all the personnel of this Department have my sincerest appreciation for their continued fine efforts and cooperation. I am also very thankful to you for your help and support in matters affecting this Department.

Very truly yours,

*S. M. Tatarian*

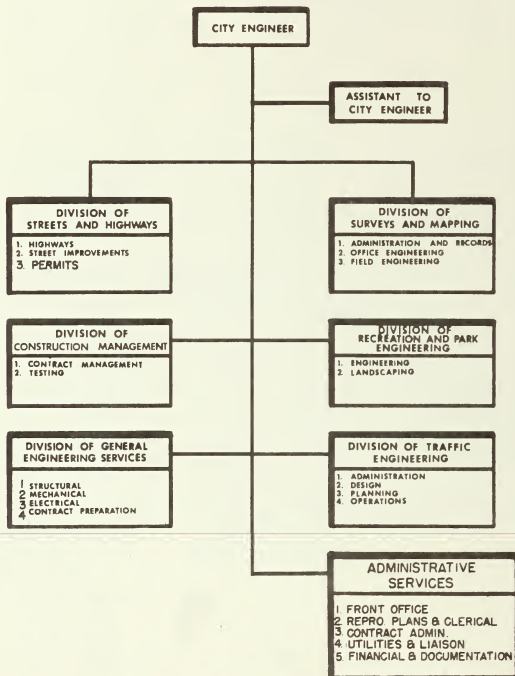
S. M. Tatarian  
Director of Public Works

# ORGANIZATION CHART

## BUREAU OF ENGINEERING

### DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1977



BUREAU OF ENGINEERING  
JEFFREY LEE, CITY ENGINEER

The 1976-77 fiscal year has been one of substantial changes in the Bureau organization and procedures, which changes were made necessary basically by the additional work load and activities stemming from (a) much deeper involvement in existing programs, (b) new programs or new projects, and (c) required new administrative procedures and services.

To better accommodate the higher level work load and activities, the Bureau was reorganized with the major change of segregating into technical and administrative functions the formerly diversified activities of the General Engineering Services Division. Under the new organization, the design functions of structural, electrical and mechanical engineering and contract preparation were retained by the General Engineering Services Division. A new division, the Administrative Services Division, was created to handle all administrative, financial, coordinative and clerical activities, including the function of contract administration and payments. In addition to the above changes, the sidewalks and streets inspection function was reassigned to the Traffic Engineering Division to provide further flexibilities in the control of street activities.

Increased activities in major existing programs included:

1. Wastewater facilities construction, including monitoring of the Construction Manager, review of shoring and dewatering proposals, surveying, materials testing and contract administration;
2. City-wide coverage of mechanical street cleaning;
3. Extensive development and renewal of recreation and park facilities;
4. Transit preferential streets; and
5. Development of a solid waste disposal system for the City.

New programs and new projects included:

1. Preferential parking for residential areas;
2. Community Development Fund work;
3. Economic Development Fund work;
4. City-wide neighborhood shopping district parking; and

5. Modification of existing structures to meet higher level of seismic safety.

Required new administrative procedures and services included:

1. New payroll control system including labor distribution of all engineering charges;
2. National advertising, distribution and sales of plans and specifications for major construction projects;
3. Development of a new microfilming system for filing and retrieval of plans and documents;
4. Improvement to the overall financial information and control system.

Our work during the past year in the various activities described above were primarily beginning efforts only, and we, therefore, look forward to continued active involvement in these areas in the years to come.

#### PREFERENTIAL PARKING

In August, 1976, the Board of Supervisors adopted a preferential parking program for those residential neighborhoods severely impacted by commuter parking. The concept of the program is that parking limits of, say, two hours, would be imposed on residential streets which would apply to all vehicles except those with permits. Since permits would not be available to non-residents of the area, commuters would be discouraged from using the streets for free all-day parking. On the other hand, residents with permits would be able to park near their homes or apartments without fear of being cited for exceeding the time limit.

Since there were a number of questions about this new concept in parking control, it was decided to implement the program in two areas first and evaluate its effects before proceeding on a large scale. One of the test areas selected was the Telegraph Hill, North Beach, and Russian Hill area. This is an area of about 100 blocks of residences located between the downtown office district and the Fisherman's Wharf commercial district and with a neighborhood shopping district in its midst. The other test location, the St. Charles Avenue area, was much smaller and involved only a few blocks adjacent to the county line and near the Daly City BART station.

Parking studies were made by the Traffic Engineering Division in each area and both were found to qualify for preferential parking. Neighborhood public hearings indicated that there was widespread support by the residents of the two test locations. The necessary legislation was approved in May, 1977. The smaller, St. Charles

Avenue area, was implemented shortly after the end of the fiscal year and the first results indicate that the program will be very successful in that type of neighborhood. The other, and more critical, test area is expected to be placed in operation in January, 1978.

Meanwhile, residents of eight other neighborhoods have already petitioned the City to be next if the program is found successful and it is decided to expand it. Parking studies are now underway in these eight areas.

#### TRANSIT PREFERENTIAL STREETS

In the 1974-75 Annual Report, it was reported that a program of installing "transit only" lanes was begun. One project described was the installation of these lanes on Mission Street and also 4th Street. However, prior to the Mission Street plan being installed, opposition developed. The plan was subsequently revised to include "transit only" lanes on Mission Street in both directions between 4th and Beale Streets. "Transit Only" lanes are also provided in the peak hours towaway lanes between 4th and 11th Streets. There have been some problems due to poor compliance by the drivers in staying out of these special lanes. An afterstudy will shortly be made which may result in some changes. As to the 4th Street treatment, the Municipal Railway has decided to defer any such treatment until the completion of the planning for the Yerba Buena Center.

A program was developed to upgrade the existing signing and striping to conform to the newly adopted Federal standards. This work will be done on the existing peak-hour "transit only" lanes on Geary, O'Farrell, Post, Sutter, California, and Sacramento Streets and on the all-day lanes on Sutter and Post Streets. Additional all-day lanes will be installed on Geary Street between Mason and Gough Streets and also on O'Farrell Street between Gough and Hyde Streets.

Experimental bus loading platforms have been on Polk Street between Sutter and California Streets for several years. Although studies showed no measurable improvement on delays to either buses or automobiles both rider and driver acceptability of them was high. We, therefore, had permanent platforms built.

Including the above-mentioned work, there will be 3.6 miles of all-day "transit only" lanes and 4.7 miles of peak-hour lanes in San Francisco.

#### CITY-WIDE NEIGHBORHOOD SHOPPING DISTRICT PARKING NEED

To relieve existing and future parking shortages in neighborhood shopping districts as reported on in the 1975-76 Annual Report, the Department of Public Works developed a program of proposed treatments to gain additional parking spaces.

The treatments proposed were basically those discussed in the previous Annual Report and are listed below. Also listed are the estimated costs to gain an additional parking space under each of the proposed treatments.

TYPE OF TREATMENT	COST TO GAIN AN ADDITIONAL PARKING SPACE	
	RANGE*	AVERAGE
1. Initiate time-limit parking (on-street)	\$13-\$22	\$16
2. Install parking meters (on-street)	\$100-\$225	\$131
3. Narrow sidewalks & install parking meters (on-street)	\$1,333-\$4,000	\$2,013
4. Construct off-street parking facility & install parking meters (off-street)	\$15,000**	\$15,000**
5. Construct additional levels to existing off-street parking facilities & install parking meters.	\$5,000	\$5,000

\*The range of costs is due to the variations of the treatments proposed in the different shopping districts.

\*\*Cost estimates include land acquisition and all other attendant expenses.

Since the completion of this second report, the Parking Authority has endorsed the above treatments for the neighborhood shopping districts. In the upcoming fiscal year, the Department of Public Works will be coordinating efforts with the Parking Authority in implementing primarily on-street treatments, wherever possible, as this type of treatment is the most cost effective. Also to be considered will be a decking of the Mission-Bartlett Parking Plaza and the Marina District Parking Structure, because this type of treatment appears feasible at those existing lots and is less expensive than constructing new off-street parking facilities.

#### FEDERAL AID URBAN SYSTEM PROGRAM UPDATE

Since the initiation of the Federal Aid Urban (FAU) Program in F.Y. 1973-74, the Federal Government, through the Federal Highway Administration, has apportioned to the City and County of San Francisco approximately \$15.3 million through fiscal year 1976-77. Under this program, the City is eligible for up to 83% Federal participation in a project cost.



Projects in this program are established in a 5-year program by an FAU committee comprised of representatives from the California State Department of Transportation, the Bay Area Rapid Transit District, San Francisco Municipal Railway, San Francisco Department of City Planning, Golden Gate Bridge Highway and Transportation District, Alameda-Contra Costa Transit District, the Port of San Francisco, and this Department. It should be noted that all projects considered in this program may be implemented only on designated FAU streets in the City. An exception to this rule are transit projects for which there are no such limitations. In San Francisco, 315.1 miles of the total 844.5 miles of city streets are designated FAU streets.

Types of projects that have been funded with the \$15.3 million have been categorized as "streets only," street/transit," and "transit only" projects. "Streets only" projects basically consist of street resurfacing, street reconstruction, new traffic signal installations, traffic signal modifications, handicap ramp installations, and rechannelization projects. "Streets/transit" projects, which are projects intended to facilitate transit movement, have basically been intersection rechannelization and transit preferential treatment projects. "Transit only" projects have consisted of transit signing, bus shelters, and rerailing projects.

Although the \$15.3 million is total FAU dollars allotted to San Francisco since 1973-74, program requirements are such that yearly allocations of FAU funds must be obligated within 4 years of allocation. To date, San Francisco has been obligating FAU funds about 2 years after funds first become available to the City.

Shown below is a summary of total FAU funds that have been allotted and obligated in San Francisco in the various categories of projects.

#### FAU PROGRAM FUNDING SUMMARY (1973-74 thru 1976-77)

PROJECT TYPE	FAU FUNDS ALLOCATED	FAU FUNDS OBLIGATED
"Streets Only"	\$7.3 million	\$3.6 million
"Streets/Transit"	\$4.0 million	\$ .7 million
"Transit Only"	\$4.0 million	\$2.4 million
Total	\$15.3 million	\$6.7 million

The 1976 Federal Highway Act has extended program funding through fiscal year 1977-78 with an estimated \$3,619,000 to be allocated to San Francisco in fiscal year 1977-78.

## OCEAN AVENUE PEDESTRIAN OVERCROSSING

As part of the rechannelization of Ocean Avenue at Phelan Avenue under the F.A.U. program, a pedestrian bridge was constructed across Ocean Avenue at San Francisco City College. This overcrossing will enable students using the BART system and the Muni system to have direct access to the campus without impeding vehicular traffic on Ocean Avenue.

The stairways serving the traffic islands in Ocean Avenue were incorporated into the arch supports for the bridge. Arches were used for the other supports for symmetry. White cement was specified for both the bridge structure and the exposed aggregate retaining walls.

The Art Commission approved the design with commendation.

## PRECITA PARK IMPROVEMENTS

Precita Park (formerly Bernal Park) is located on Precita Avenue between Alabama and Folsom Streets, in the East-Central area of the City. Prior to the start of work the Park was in a state of disrepair and offered little in the way of amenities to the neighborhood. The children's play area was in a run-down condition, seating was almost non-existent, and the irrigation facilities were inadequate to maintain the green expanse of lawn which provided the district with highly valued open space.

Although Precita Park is small the project is significant because of the extensive and active participation by neighborhood groups in both the obtaining of funds and the planning of the improvements that were made. Interested and motivated residents met many times

Right: Some of the new benches and game tables installed along the perimeter of Precita Park.  
Opposite Page: The play structure designed for Precita Park which combines various slides and climbing experiences.



with representatives of City Departments to define development priorities. Community meetings were held with support from various neighborhood groups and ballots were cast (over 200 in all) selecting a specific design among many options. Thus a truly democratic process was involved in the design stage of the project.

Funding was provided from many sources. In addition to a portion from the City's budget the Bank of America granted \$5,000 under the Friends of Recreation and Parks "Adopt a Park" program, and two HUD Grants were involved, namely; an Open Space Grant for Park Improvements and a Community Development Program Grant.

The completed development includes a completely re-designed childrens play area containing a unique play structure combining slides, climbing experiences, and play platforms connected by angling ramps. Also in the Park redevelopment is a new irrigation system, walks for improved circulation, new seating and game tables, and additional plantings of trees and shrubs to complement those existing.

Costing approximately \$95,000, this development is relatively small in scope but the intensity of the grass roots neighborhood participation in all phases of the improvement and the success resulting therefrom, gives this project a significance that is not usual in the rebuilding of a small urban park.



Another 990 ramps are scheduled to be constructed in the fiscal year 1977-1978.

Property owners with subsidewalk basements were notified this year and requested to modify their basement structures to accommodate the construction of handicap ramps. Cooperation from property owners on the handicap ramp program has been overwhelmingly positive with approximately 70% of the property owners making modifications to their basements.

#### CONTROL AUXILIARY WATER SUPPLY FOR FIREFIGHTING BY REMOTE CONTROL

During fiscal year 1976-77, ten control valves of the auxiliary water supply system (AWSS), were motorized with remote control operation capabilities. The Fire Department can now increase the water supply to areas where needed for firefighting instantaneously by remote control from central control located at the Jones Street Tank.



Water supply of the AWSS to an area is through one normally-opened control gate valve. All other valves connected to mains within the area are normally closed. The reason for this is to isolate mains and hydrants within the area to prevent excessive water loss due to broken mains resulting from earthquake or ground settlements. If firefighting operations require more water than can be delivered through the one open valve, the fire chief can call the Command and Control Center at the Jones Street Tank by radio to order opening of the motorized valve.

The signal is then sent through telephone line to activate the electric valve operator to open the valve. The whole operation can be accomplished within seconds, whereas the old system may take many minutes to dispatch a valve wagon to the scene, locate the valve cover, and manually operate the valve.

The electric valve operators were installed on the existing valves with minimum modification to the valves. In case of power failure, the valve can be operated manually as before.



Opposite Page: Map showing the locations of the motorized valves added to the auxiliary water supply system. Left: The Command and Control Center which is located at the Jones Street Tank. Below: One of the ten newly installed electric valve operators.





## DIVISION OF SURVEYS AND MAPPING

Fiscal year 1976-77 has been an exceptionally busy year for this Division due to added workload in connection with the Waste Water Program, the Yerba Buena Convention Center and the ever increasing number of condominiums and condominium conversions. The statistics section below shows the number of maps of various categories prepared or processed, checked and recorded, the number of field surveys made for various City agencies, and major legislative activities undertaken.

### STATISTICS

#### DIVISION OF SURVEYS AND MAPPING

##### 1. MAPS

###### a. Subdivision Map Act and Land Surveyors Act Activities:

Condominium Maps Approved and Recorded-----	19
Parcel Maps Approved and Recorded-----	188

###### b. Street Actions:

Street Dedications-----	11
Street Vacations-----	12
Changes in Official Widths of Sidewalk-----	2

###### c. Survey Plats Prepared----- 16

###### d. Drawings Prepared for Studies Pertaining to Property, Street or Easement Actions----- 18

##### 2. SURVEYS

###### a. Number of Surveys----- 68

Bureau of Sanitary Engineering-----	8
Public Assessment-----	0
Bureau of Engineering-----	44
Bureau of Architecture-----	1
Recreation and Park Department-----	8
Municipal Railway-----	0
Hetch Hetchy-----	7

###### b. Extent of Surveys:

Topographic Surveys-----	51.7	- Acres
Design Data-----	11.2	- Miles
Construction Layout-----	7.8	- Miles
Post-Construction Examination-----	0.4	- Miles
Earth Movement Observations-----	1.9	- Miles
Block, Site and Lot-----	1.1	- Miles
Monument Lines-----	92.4	- Miles
Precise Level Network-----	32.6	- Miles
Miscellaneous-----	9.5	- Miles



Monuments:

Frames and Covers Reset----- 14 - Each  
Examined, Repaired, Referenced-----283 - Each

Bench Marks:

Established, Checked----- 776 Intersections

c. Number of Survey Parties----- 5

3. MISCELLANEOUS

Reports to City Attorney's Office----- 7  
Investigations for and Reports to the Board  
of Supervisors Regarding Appeals from  
Decisions of City Planning Commission----- 9  
Legal Descriptions for Deeds Prepared and  
Checked----- 86

# DIVISION OF TRAFFIC ENGINEERING

## 1. PARKING METERS

76-77

New Installations-----	160
New Installations in Public Parking Lots-----	0
Removals-----	135
Installations-----	323
Relocations-----	12
Temporary Removals-----	136
Total Number in Place June 30, 1976-----	15,737

## 2. MISCELLANEOUS INVESTIGATIONS

Written Reports to San Francisco Parking Authority	4
Parking Checks-----	4
Advisory Appearance & Conference with San Francisco Parking Authority-----	12
Formal STOP and YIELD Sign Investigations-----	178
Formal Parking Control Investigations-----	140
Formal Traffic Signal Investigations-----	56
Other Formal Investigations-----	430
Auto Parking Station or Garage Permits-----	20
Miscellaneous Parking Checks-----	60

## 3. PAVEMENT PAINTING

Standard Striping, Miles-----	380
12-inch Stripes, Feet (Crosswalks)-----	500,000
12-inch Yellow Stripes, Feet (School Crosswalks)---	175,000
Bus Zones, Feet -----	105,000
Parking Stalls (All Types)-----	6,000
New School Intersections -----	3
Total School Intersections in Place June 30, 1977-	959
Pounds of Reflective Beads Used-----	50,000
8-inch Stripes, Feet-----	89,000
Spotting and Removing, Miles-----	62

## 4. TRAFFIC AND STREET NAME SIGNS

a. Traffic Signs	<u>Completed</u> <u>1976-77</u>
Parking Signs Installed-----	1,373
Parking Signs Repaired or Changed-----	1,237
Parking Signs Removed-----	387
Other Signs Installed-----	1,348

Other Signs Repaired or Changed-----	1,412
Other Signs Removed-----	144
STOP Signs Installed-----	437
STOP Signs Repaired or Changed-----	623
STOP Signs Removed-----	69
TOTAL	7,030

Special Signs Made by City Forces-----	4,142
Estimated Cost 1976-77-----	\$83,500
Estimated Total Number in Place June 30, 1977	51,200

b. Street Name Signs

Street Signs Repaired or Changed-----	735
Street Signs Installed-----	35
Street Signs Removed-----	0
TOTAL	770

Estimated Cost 1976-77	\$40,100
Estimated Total Number in Place June 30, 1977	5,900

5. TRAFFIC LEGISLATION

	1976-77 <u>Completed</u>	1976-77 <u>Deleted</u>	6-30-77 <u>Number In Place</u>
STOP Intersections	110	0	2,943
Through Streets, Miles	0	0	114
One-Way Streets, Miles	1.48	0.13	98.0
Speed Zones (Other than 25)	1.14	0.47	70.4
Turn Restrictions (24 Hrs.)	7	0	
Turn Restrictions (Peak Hrs.)	2	0	
Towaway, Block Faces	22	6	
Time Limit Block Faces	59	41	
Angle Parking, Block Faces	15	2	
Other Turn Controls	17	0	
No Parking Any Time, Block Faces	26	3	
Items discussed at ISCOTT	643		
Items having Department Public Hearing	139		
Items to Board of Supervisors for Action	202		
Items Amending Traffic Code	9		

## 6. TRAFFIC SIGNALS AND CHANNELIZATION

	<u>1976-77</u> <u>Completed</u>	<u>6-30-77</u> <u>Number</u> <u>In Place</u>
a. Channelized Intersections:		
Concrete Islands	2	300
Raised Pavement Bars	2	90
TOTAL	0	390
b. Signalized Intersections:		
3-Light Installations	10	901
Equipped with Pedestrian Signals	8	350
Actuated Signals	155	37
School Flashing Signals	0	11
c. Pedestrian Overpasses (over City Streets)	3	26

## 7. CLAIMS ACTIVITY

The Department of Public Works, through legal representation by the City Attorney, disposed of 256 claim actions filed against the City for personal injury or property damage resulting from street or sidewalk use and other matters pertaining to Public Works.

In respect to lawsuits, in which the Department of Public Works was named in 65 cases, the City paid \$365,310.28 in monies through judgments or settlements.

Of the 256 claim actions filed, the Department of Public Works denied 103 cases, and, in 30 cases, settled for a total amount of \$792,264.67.

The 256 claim actions represent a small portion of those requiring investigation by street inspection personnel during the fiscal period. The total number of registered claims investigated was 482.

In addition to claims investigation, the Department assists the City Attorney's Office in preparation of defense actions through consultation, giving depositions, preparing answers to interrogatories, and making court appearances as City witnesses.

# SUMMARY

	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>
Number of Cases			
Disposed of	113	205	256
Judgments Paid	1	1	9
Litigated Settlements	47	54	56
Settlements at			
Claim Stage	40	11	30
Dismissed	25	140	130
Total Amount of			
Claims	\$5,360,835.00	\$9,343,924.78	\$792,264.67
Total Amount			
Paid	\$1,051,720.09	\$ 186,621.37	\$365,310.28
Registered			
Claims			
Investigated	463	447	482

## PERSONNEL AT BEGINNING AND END OF FISCAL YEAR

<u>BUREAU OF ENGINEERING</u>	<u>July 1, 1976</u>	<u>June 30, 1977</u>	<u>Change</u>
Administration	3	4	+1
Administrative Services		36	+36
Construction	41	41	0
General Engineering Services	103	62	-41
Recreation & Park Engin.	16	14	-2
Streets & Highways Engin.	21	18	-3
Surveys & Mapping	31	26	-5
Traffic Engineering	46	50	+4
	<u>261</u>	<u>251</u>	<u>-10</u>
Employees in Professional Classifications .....			120
Employees in Technical Classifications .....			95
Employees in Clerical Classifications .....			36

## PAYROLL

The following tabulation shows the number of employees and total payroll charged to General, Project and Road Funds:

SOURCE OF PAYROLL FUNDS	EMPLOYEES 1976-77	PAYROLL 1976-77
General Fund (Budget Payroll)	59	\$ 2,690,182.00
Project Funds (Gas Tax, Bond, General, etc.)	152	\$ 2,873,414.00
Road Fund - Traffic Engineering	40	\$ 391,636.00
	<u>251</u>	<u>\$ 5,955,232.00</u>

## RETIREMENTS

During the past year, the following employees were retired and recognition is given for their faithful service to the Bureau:

Rita Morris	07-01-76	B408 General Clerk Steno	30 $\frac{1}{2}$	Yrs.
Alice Chase	07-01-76	1406 Sr. Clerk	30	Yrs.
Roy L. Alsterlind	07-01-76	5314 Survey Party Chief	25	Yrs.
Robert Schwarz	07-01-76	5366 Engineering Assoc. II	24	Yrs.
William E. Bryan	07-15-76	5208 Civil Engineer	29 $\frac{1}{2}$	Yrs.
Robert W. Jacks	12-01-76	5310 Surveyor Field Asst.	12 $\frac{1}{2}$	Yrs.
Stephen A. Stelmack	12-01-76	6230 Street Inspector	8 $\frac{1}{2}$	Yrs.
Frank J. Barrett	02-01-77	5213 Instrument Man	20 $\frac{1}{2}$	Yrs.
Winfred E. Church	02-01-77	5362 Civ. Engineer Assoc. I	20	Yrs.
Stephen H. Jay	04-27-77	5362 Civ. Engineer Asst. II	25	Yrs.
Eric F. Nylander	05-16-77	6318 Const. Inspector	21 $\frac{1}{2}$	Yrs.



BUREAU OF ENGINEERING

SUPERVISORY PERSONNEL

As of June 30, 1977

Jeffrey Lee, City Engineer  
Richard J. Evans, Assistant to City Engineer

DIVISION & SECTION

ADMINISTRATIVE SERVICES

Front Office  
Reproduction, Plans & Clerical  
Contract Administration  
Utilities & Liaison  
Financial & Documentation

G. L. Costanzo, Sr. Engineer  
J. A. Jelincich, Engineering Asst.  
E. Harmon, Principal Clerk  
J. S. Barrett, Engineer  
H. H. Beneke, Engineer  
H. G. Louie, Admin. Engineer

CONSTRUCTION MANAGEMENT

Wastewater Construction  
Construction  
Quality Control  
Contracts

T. J. Ford, Jr., Sr. Engineer  
P. T. Meagher, Engineer  
J. Moeck, Engineer  
W. J. Melia, Jr., Assoc. Mat. Eng.  
E. W. Pearson, Engineer

GENERAL ENGINEERING SERVICES

Contract Preparation  
Electrical Design  
Mechanical Design  
Structural Design

W. J. Scruggs, Sr. Engineer  
C. T. Jensen, Engineer  
A. E. Tanner, Sr. Engineer  
C. J. Brady, Sr. Engineer  
G. T. Jeong, Sr. Engineer

RECREATION & PARK ENGINEERING

Professional Contracts  
Engineering  
Landscaping

D. Martin, Sr. Engineer  
A. T. Lee, Assoc. Engineer  
W. H. Person, Engineer  
H. C. Schmidt, Sr. Landscape Arch.

STREETS & HIGHWAYS ENGINEERING

Highways Design  
Street Improv. & Recon. Design  
Permits, Encroach., & Spec. Proj.

L. T. Tom, Engineer  
D. Doon, Assoc. Engineer  
C. G. Jarrard, Assoc. Engineer  
G. M. Wong, Engineer

SURVEYS & MAPPING

Admin., Engineering & Mapping  
Field Surveys

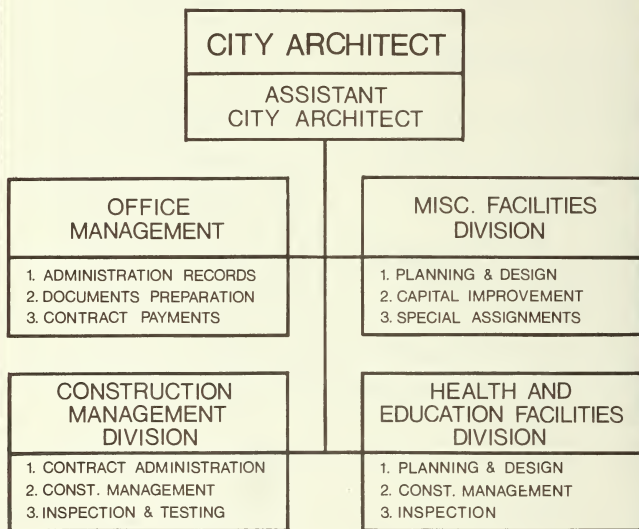
G. Q. Woo, Sr. Engineer  
R. Wong, Assoc. Engineer  
W. T. Gee, Chief Surveyor

TRAFFIC ENGINEERING

Design  
Planning  
Operations

W. Marconi, Sr. Traffic Engineer  
G. R. Hansen, Traffic Engineer  
S. A. Shoaf, Assoc. Traffic Eng.  
N. E. Bray, Traffic Engineer

**BUREAU  
OF  
ARCHITECTURE  
DEPARTMENT OF PUBLIC WORKS  
ORGANIZATION CHART  
JUNE 30, 1977**



The Bureau of Architecture supervises the design and construction of new public buildings, and the modernization and alteration of existing public buildings, under plans duly approved by the various City, State and Federal departments which are involved.

Once the need for a building project is established, the Bureau assists the requesting City Department in the preparation of a basic program and the acquisition of a building site. The program consists of general information relative to the activities and services to be performed in the building, the number and type of employees who will be housed in the building, the number of public to be served, and related data. The Bureau then prepares sketches, specifications, and estimates of cost, and when funds are available, prepares or supervises the preparation of the schematic, preliminary and final drawings, specifications, and estimates. Upon approval of the final documents, bids are requested by advertisement in the official newspaper, opened in public, reviewed and analyzed, and recommendations are prepared for award of construction contract. After award and certification of the contract, Bureau personnel inspect the construction as it develops, certify monthly progress payments, verify that it has been properly constructed in conformance with the plans and specifications, and initiate the final payment to the contractor.

## ORGANIZATION

The organization of the Bureau is broken down into four separate divisions. Office Management, Health and Education Facilities Division, Miscellaneous Facilities Division, and Construction Management Division.

## OFFICE MANAGEMENT

### I. ADMINISTRATION RECORDS

This section is responsible for personnel matters, all incoming and outgoing correspondence, dispensing information to contractors and architects, the operation of the Bureau's main counter, requisitioning supplies, equipment and related work.

### II. DOCUMENTS PREPARATION

This section is responsible for the assembly and issuance of the contract documents to contractors, the filing of original drawings, blueprints, and specifications and related work.

### III. CONTRACT DOCUMENTS

This section is responsible for the preparation of documents authorizing payments for work performed by contractors and consultants.

#### HEALTH AND EDUCATION FACILITIES DIVISION

##### HEALTH FACILITIES

During the fiscal year 1976-77, the Health Facilities Section was primarily engaged in providing contract administration and inspection services for Phase II construction of the New Hospital Building of the San Francisco Medical Center Project. In addition, this Division prepared plans, specifications, estimates, inspection and contract administration relative to the alteration and modernization of Health Department Buildings.

#### 1. PROJECT UNDER CONSTRUCTION OR COMPLETED

##### A. SAN FRANCISCO MEDICAL CENTER PROJECT

San Francisco Medical Center Bond Issue	\$33,670,000
State and Federal Subventions	<u>5,865,697</u>

Total Project Funds	\$39,535,697
---------------------	--------------

#### 1. New Hospital Building \$30,078,565

Contract was awarded June 9, 1971.  
Phase I construction started July 26, 1971 and was substantially completed for occupancy on August 10, 1976.

The Hospital Building is a seven-story reinforced concrete structure with a gross finished floor area of 635,000 square feet, providing 653 beds for general medical and surgical care and including psychiatric and prisoner patients, all with comprehensive ancillary facilities and services.

Phase II construction started July 23, 1976 and is 85% complete.

This work includes demolition, landscaping and paving for parking spaces to accommodate the new Hospital Building. It is estimated that this work will be completed in October 1977.

#### 2. Dishwasher Scrapping Table and Conveyor \$52,392

This installation provides an efficient labor saving dishwashing operation. Project was completed December 1976.

3. Revisions to Anesthesia Department \$25,121

Additional office space will be provided in two shelled areas on the third floor adjacent to the surgical suite. Work includes partitioning, furred ceilings, electrical and mechanical modifications. Construction is approximately 99% complete.

4. Modification of Nursing Unit 6B- Interim Security Unit \$19,000

This work is located on the sixth floor, north east wing and will provide a temporary location for in-patient nursing care of prisoners until current construction of the permanent facility is completed on the seventh floor. Construction is approximately 95% complete. This wing has been occupied by prisoner patients during construction.

5. Security Patient Care Unit \$633,300

This project will be the permanent facility on the seventh floor southeast wing that will provide in-patient nursing care for prisoners of the City and County jails. The new ward unit includes holding facilities for prisoners requiring treatment at the San Francisco Medical Center. Completion of construction is scheduled for November 1977.

6. Psychiatric Patient Care Changes

Following the State Health Department policy of phasing out certain mental health facilities, it became necessary for the Department of Public Health to provide the required Mental Care for San Francisco citizens.

a. Revisions to Ward Units 7A and 7C \$45,496

This project included revisions to finished areas on the seventh floor, northwest and southwest wings of the new Hospital Building and provides for the treatment of patient mental illness. The work consisted of modification to doors and hardware and installation of plastic barriers which provides additional safeguards and protection for the patients. Project was completed July 1976.

b. Modification of Psychiatric Unit Patient Care Unit 7B \$75,150

This project includes modifications to a finished area on the seventh floor northwest wing. Modifications will be made to doors,

locks, sprinkler heads, shower fixtures, and other items requested by the Health Department. Detention screens and lighting fixtures with heavy plastic lenses will be provided. Construction is approximately 98% complete.

B. SAN FRANCISCO GENERAL HOSPITAL

1. Toxicology-Chemistry Laboratory \$463,587

A permanent Toxicology-Chemistry Laboratory will be provided on the fifth floor of existing Building 30, enabling the Department of Public Health to perform general toxicological and chemical analysis in connection with Public Health problems. The project includes partitioning, furred ceilings, doors, cabinets, electrical and mechanical work. Construction is scheduled for completion in October 1977.

2. Alteration to Building 80, Second Floor Executive and Administrative Offices \$227,997

This facility will provide offices for the administrative staff of the San Francisco General Hospital, Outpatient Department. The work includes demolition, partitions, doors, flooring, ceilings, electrical and mechanical. Construction is approximately 37% complete.

3. Electrical Outlets, Clinical Laboratory Building No. 100, 200 and 300 \$ 4,550

This project will provide additional electrical outlets in the Laboratory Building required by OSHA. Construction is scheduled for completion in September 1977.

C. LAGUNA HONDA HOSPITAL

1. Life Safety Code Requirements

The State Fire Marshall's office stipulated numerous deficiencies in need of correction that are mandatory to comply with life safety code requirements. This work includes smoke barriers, fire doors, glass replacement, enclosures, sealing corridor transom windows, etc. The following projects are presently under construction.

a. Panic Hardware on Stairways

Doors - Phase II (Various Locations). \$24,324  
Scheduled for completion August 1977.

- b. Smoke Barrier Doors - Phase I \$90,445  
(Various Locations)

Scheduled for completion August 1977.

- c. Fire Sprinklers in Buildings D & G \$29,699  
Phase III

Scheduled for completion September 1977.

2. Exterior Stair from Employees' Dining \$30,000  
Room

This work will provide a second means of egress from the employees' dining room. Construction is approximately 62% complete.

3. Modernization of Laundry Facilities \$114,000

Included in this project is the installation of a new tumbler and lint filter, a new extractor and relocation of an existing tumbler, complete with mechanical and electrical connections. Work completed in February 1977.

- D. HUNTER'S POINT-BAYVIEW MODEL CITIES HEALTH CENTER \$1,317,982

This project will provide health care services for the Hunter's Point-Bayview District. The building (construction started July 1977) will be one story concrete block and wood frame structure approximately 10,000 square feet. Construction is scheduled for completion in March 1978.

- E. NORTH OF MARKET SENIOR SERVICE CENTER \$159,245

Primary care outpatient clinical services, and limited Physio-Therapy, Occupational-Therapy and Pharmaceutical services will be provided by this project for senior citizens. The work includes partitions, doors, ceilings, casework, roofing, sheetmetal, flooring, painting, mechanical and electrical. Construction is scheduled for completion in October 1977.

- F. METHADONE TREATMENT CENTER \$10,680

Included in this project is the installation of partitions, doors, millwork and electrical work. Construction is approximately 96% complete.

## II. PROJECTS SCHEDULED FOR CONSTRUCTION

### A. NEW HOSPITAL BUILDING

1. Wall Guards \$30,000



Work includes installation of preformed wall guards at various locations in the new hospital building, to prevent damage to walls by the movement of carts, beds, and other equipment. Construction is scheduled for completion in September 1977.

2. Standby Diesel Generator Installation and Control Modifications \$105,000

This project will provide an additional (fail-safe) backup system in the event of power failures. Construction is scheduled for completion in August 1978.

## B. LAGUNA HONDA HOSPITAL

1. Life Safety Code Requirements - The following projects are presently scheduled for completion as follows:

- a. Smoke Barrier Partitions and Doors - Phase IV \$17,285  
(Surgery & Radiology)

Scheduled for completion November 1977.

- b. Exit and Smoke Barrier Doors - Phase VII (Various Locations) \$52,000

Scheduled for completion November 1977.

- c. Smoke Barrier and Stair Enclosure - Phase IX (Main, A & B Buildings) \$114,000

Scheduled for completion November 1977.

- d. Fire Sprinklers in Buildings C, E and F - Phase VI \$70,000

Scheduled for completion February 1978.

- e. Fire Sprinklers in Main Corridors - Phase X \$185,000

Scheduled for completion November 1977.

- f. Ventilation Systems in Janitor's Closets - Phase V (O, C, D, & G Bldg.) \$40,000

Scheduled for completion October 1977.

- g. Safety Devices for Patient Toilet Rooms (Various Locations) \$90,000

Scheduled for completion February 1978.

- h. Fire Sprinklers in Main Building and Buildings A & B - Phase VII \$366,000

Scheduled for completion November 1977.

- i. Correction of Exit Deficiencies - Phase XI (Various Locations) \$110,000

Scheduled for completion November 1977.

2. Interior Demolition - Clarendon Hall \$82,555

The interior demolition of Clarendon Hall, includes partitions, doors, ceilings, cabinets, flooring, mechanical and electrical work. Completion of demolition is scheduled for December 1977. Working drawings and specifications are presently being prepared for the alteration work, which will proceed after demolition.

- C. REMODELING OF FIRST FLOOR CLINICAL AREA - DISTRICT HEALTH CENTER NO. 1 \$21,000

This project will provide needed examination rooms and storage. The work will include partitioning, suspended ceilings, cabinets, mechanical and electrical work. Working drawings and specifications have been completed and construction is projected to be completed by January 1978.

## EDUCATION FACILITIES

### I. SAN FRANCISCO COMMUNITY COLLEGE DISTRICT

This section is responsible for all Planning, Design and Construction of buildings for the San Francisco Community College District. Included is all new construction, additions, alterations and maintenance and repair projects.

#### A. PROJECTS COMPLETED

1. The addition to the Men's Gymnasium (Weightlifting Room) was completed and accepted in June 1977.
2. The Library carpeting in the classroom and Library Building was completed and accepted in May 1977.

#### B. PROJECTS UNDER CONSTRUCTION

1. The Social Science Classroom and Laboratory Building (Cloud Hall East), a \$6,757,300 project commenced in October 1974 and is scheduled for completion November 1977.
2. The Downtown Community College Education Center, a \$7,000,000 project commenced in August 1975 and is scheduled for completion in January 1978.



Left: Downtown Community College building at Fourth and Mission Streets. Below: The Social Science Classroom building at City College.



### C. PROJECTS SCHEDULED FOR CONSTRUCTION

1. Electrical Laboratory Alterations for Science Building, City College is a \$96,417 project, with completion scheduled for December 1977.
2. John Adams Paving, a \$20,044 project, is scheduled for completion in September 1977.
3. Replacement of Existing Bleachers, Men's Gymnasium, City College, is scheduled for completion in December 1977.
4. College Campus Lighting, City College, is a \$32,250 project, with completion scheduled for November 1977.
5. Cafeteria Security Gates, Smith Hall, City College, is a \$4,577 project, with completion scheduled for September 1977.
6. Telescope Dome, City College, is a \$10,721 project, with completion scheduled for October 1977.

### D. PROJECTS IN DESIGN STAGE

1. Lecture Hall Alterations, City College.
2. Elevator Alterations, City College.
3. Student Union Building Alterations, City College.
4. Mission District Community College.
5. Outdoor Amphitheater, Student Union Building, City College.
6. John Adams Day Care Facility.
7. Alteration to Radiologic Technology Laboratory, City College.
8. Replace fire brick in boiler and ceramic kilns.
9. Install Dry fire extinguisher system in cafeteria kitchen.

## II. SAN FRANCISCO UNIFIED SCHOOL DISTRICT

This section is responsible for the construction administrative work assigned to the Bureau of Architecture by the San Francisco Unified School District.

A. DISTRICT FUNDS

1. George Washington Carver Elevator for Handicapped is a \$68,000 project scheduled for completion in July 1977.
2. Clarendon School Handicapped Facility, is a \$163,840 project scheduled for completion in July 1977.
3. J. Eugene McAteer High School Modification of Induction Boxes is a \$77,019 project scheduled for completion in January 1978.

B. FIELD ACT FUNDS

A major portion of this work has been completed and the following indicates the status of projects the School Facilities Division has been responsible for during this fiscal year:

Construction Completed

1. Everett Junior High School
2. Sherman School
3. Chinese Education Center
4. Farragut Children's Center

Under Construction

1. Mission High School East Wing

MISCELLANEOUS FACILITIES DIVISION

The Miscellaneous Facilities Division is responsible for the preparation of the Bureau's Annual Capital Improvement Program and provides architectural services for all Public Works projects other than those for the Department of Public Health. The various projects performed by this Division are listed as follows:

I. FIRE DEPARTMENT

A. FIRE DEPARTMENT BOND ISSUES \$4,953,450

1964 Bond Issue  
1952 Bond Issue

B. PRESENT STATUS OF BOND PROGRAMS IS AS FOLLOWS:

1. Completed 100% \$4,457,519

Headquarters Building:	\$1,153,117
Engine Company No. 28:	246,796
Engine Company No. 26:	300,607
(Old No. 7)	

Engine Company No. 1 (Old No. 17)	477,512	
Engine Company No. 43:	396,426	
Engine Company No. 14: (Old No. 36)	344,573	
Engine Company No. 9: (Old No. 37)	559,298	
Engine Company No. 33:	303,261	
Memorial Plaque: (Headquarters Bldg.)	10,871	
Engine Company No. 2:	3,664	
Engine Company No. 16:	10,904	
Engine Company No. 31: (Old No. 46)	74,139	
Engine Company No. 3:	566,351	
2. Funds Expended		\$4,560,013
3. Funds Unencumbered		66,679
4. Funds Encumbered (Misc. Fees, etc.)		105,531
5. Funds Still Unallotted (Balance of 1964 Bond)		221,227

C. FIRE DEPARTMENT - GENERAL

1. Firehouse for Engine Company No. 13 (Old No. 1) provided through a transaction whereby the builders of Embarcadero Center obtained the Engine No. 1 property for expansion and the City obtained this new station house.

Complete construction cost. \$1,086,000

2. Central Fire Alarm Building

The whole interior of this building was remodeled to accommodate the new command and control system. Project completed in August 1976. \$327,178

D. 1974 FIREHOUSE BOND FUND \$2,200,000

Projects Underway

1. Engine No. 42 will replace the existing building. Contract documents were held up by former commission because of high cost. This project was reactivated by present commission and bids are due August 1977. \$550,000
2. Engine No. 40 alterations & repairs. \$70,000  
Bids to be received in September 1977.

3. Engine No. 34 alterations & repairs. \$70,000  
Plans are approximately 50% complete.  
Bids to be received in December 1977.
4. Engine No. 8 alterations & repairs. \$110,000  
Plans are just being started. Delay was  
due to the final acquisition of additional  
property at the present site.
5. Engine No. 4 The plans were discontinued \$330,000  
at approximately 30% of completion state  
due to the reshifting of personnel to other  
companies and the possible abandonment of  
this house. It has now been reactivated  
and working drawings are approximately 50%  
completed. (Plus \$221,000 from previous  
Bond Funds)
6. Headquarters Building alterations.  
Project cancelled.
7. Engine No. 30 alterations. Project cancelled due  
to deactivating house.

Projects Completed

1. Engine No. 25 alterations & repairs. \$81,000  
Occupied March 1977.

II. SHERIFF

Proceeding with a program to bring the jail facilities into more rigid security standards, the following projects were:

A. COMPLETED UNDER 1976-77 BUDGET YEAR.

1. Window Grilles \$11,049  
San Francisco County Jail No. 1

B. UNDER CONSTRUCTION FOR 1976-77 BUDGET YEAR.

1. Gun Security Room \$16,460  
San Francisco County Jail No. 1
2. Grilles for Stair Louvers \$5,980  
Hall of Justice Roof

C. PROJECTS IN THE PLANNING STAGE  
MONEY ALLOTTED IN 1976-77 BUDGET.

1. Isolation Cells \$18,000  
San Francisco County Jails No. 1 and 3



D. PROJECTS IN THE PLANNING STAGE  
MONEY ALLOTTED IN 1977-78 BUDGET

- |    |   |           |
|----|---|-----------|
| 1. | New Gun Security Room<br>San Francisco County Jail No. 6  | \$13,100  |
| 2. | Isolation Cells<br>San Francisco County Jail No. 6  | \$24,500  |
| 3. | Metal Grilles south side<br>San Francisco County Jail No. 1   | \$16,000  |
| 4. | Alterations to Jail Infirmary<br>San Francisco County Jail No. 2  | \$192,500 |
| 5. | Fire Marshal's Requirements<br>San Francisco County Jails No. 2 and 4   |           |
|    | Smoke free stairs for egress with chain link enclosure to prevent escape. The plans and specifications were 95% complete but the job has been withheld. Funds are being requested for the 1978-79 Budget. | \$430,600 |

III. POLICE DEPARTMENT

- |    |  |          |
|----|--|----------|
| A. | <u>ALTERATIONS TO ROOM 459, HALL OF JUSTICE FOR THE FUTURE EMERGENCY "911" TELEPHONE SYSTEM, PHASE II, contract awarded July 1976. The work is 99% completed.</u>              | \$42,000 |
| B. | <u>CELL TOILET REPLACEMENT (6 STATIONS) AND CONVENIENCE FACILITIES FOR WOMEN (8 STATIONS).</u> These two jobs were combined into one project. Bids were received in June 1977. | \$50,000 |

IV. RECREATION-PARK DEPARTMENT

- |    |   |           |
|----|---|-----------|
| A. | <u>CHINESE PLAYGROUND RECREATION BUILDING.</u> After numerous delays due to insufficient funds, this project is finally under construction and is 10% completed as of August 1977.  | \$350,000 |
| B. | <u>MARTIN LUTHER KING ENCLOSURE</u> This project provides a new building to enclose an existing swimming pool for year-round use by the community, project completed in April 1977. | \$607,000 |

- C. SHARON BUILDING RESTORATION. \$199,000  
This building suffered a severe fire in 1974 and has been boarded up because of inadequate budget for rehabilitation. Additional funds have been requested to brace the walls so that a new roof may be installed. Project will be advertised for bids in October 1977.
- D. MARINA SMALL CRAFT HARBOR TOILET. \$74,000  
This project was completed in March 1977.
- E. JACKSON PLAYGROUND FIELDHOUSE. \$150,000  
This job is held up while two neighborhood groups reconsider whether they want a new building or renovate the existing. Contract drawings for a new building were 90% completed when project was stopped.
- F. FRANCIS SCOTT KEY MONUMENT. \$135,000  
This project was completed in July 1977.
- G. NEW HUNTER'S POINT YOUTH PARK. \$450,000  
This is a playground-recreation area to be managed by the Hunter's Point Youth Park Foundation. Project was completed in December 1976.
- H. NEW RECREATION BUILDING FOR ROLPH PLAYGROUND. \$180,000  
An architect has been appointed and preliminary plans are underway.
- I. ALTERATIONS TO SENIOR CITIZENS CENTER. \$450,000  
Preliminary plans have been approved and contract documents are being prepared. Project will be advertised for bids in January 1978.
- J. NEW RECREATION BUILDING FOR CROCKER AMAZON PLAYGROUND. \$180,000  
An architect has been appointed and preliminary plans are underway.
- K. MISCELLANEOUS RECREATION BUILDING ALTERATIONS:
1. Bernal Heights Recreation Building, \$20,000  
completed August 1977.
  2. Excelsior Recreation Building, \$25,000  
completed March 1977.
  3. Hayes Valley Recreation Building, \$22,000  
planning will begin October 1977.



Top: Martin Luther King Pool Enclosure.  
Above Left: Cayuga Recreation Building Addition. Above Right: New Convenience Station at the Marina Small Craft Harbor. Right: The Hunters Point Community Youth Park.



4. Milton Meyer Recreation Center, project will be advertised for bids in October 1977. \$160,000
5. Children's Carousel, project is 50% completed. \$25,000
6. Herz Recreation Building, project will be advertised for bids in September 1977. \$75,000
7. Cayuga Recreation Building Addition, project is 70% completed. \$64,000
8. Glen Park Recreation Center, project is 5% completed. \$148,000
9. Hamilton Recreation Center, project will be advertised for bids October 1977. \$75,000
10. Helen Wills Recreation Building Addition, project will be advertised for bids in November 1977. \$135,000
11. Potrero Hill Recreation Center, project will be advertised for bids in August 1977. \$70,000
12. Portsmouth Square, Phase I, completed July 1977. Phase II planning is now underway. \$12,000
13. Portola Recreation Center, completed December 1976. \$52,000
14. Garfield Square Natatorium, completed November 1976. \$29,000

#### V. CONTROLLER

EDP Area, Basement City Hall: Security measures for the Electronic Data Processing Department. \$75,000  
Project completed July 1976.

#### VI. ART COMMISSION

Renovation of old South San Francisco Opera House: \$625,000

This community center for the Hunter's Point-Bayview district was completed in December, 1976. It will provide a place for music recitals and plays as programmed by the community and managed by the Art Commission Community Art Committee.

Old South San Francisco Opera House Plaza: \$250,000.

This project will be federally funded under the Local Public Works Act. Contract documents are finished and project will be advertised for bids as soon as funds are approved.

VII. WAR MEMORIAL VETERANS BUILDINGS

A. OPERA HOUSE:

Work in this building required careful scheduling due to the many activities booked throughout the year. Most of the work had to be done in the month of June when the house was "dark".

1. Reupholstery of 1300 Orchestra Seats, \$155,000  
completed November 1976.
2. New Curtains and Draperies, bids received in July 1977. \$7,000
3. Replace Stage Floor at Opera House, \$75,000  
work will be performed during the expansion of the Opera House in early 1978 to minimize disruption.
4. Opera House Additions and Alterations. \$4,000,000  
This project will be federally funded under the Local Public Works Act. Contract documents are finished and project will be advertised for bids as soon as funds are approved.

B. VETERANS BUILDING: \$41,000

Remodeling of freight elevators for the San Francisco Museum of Art, completed January 1977.

VIII. CITY HALL

A. SKYLIGHT RECONSTRUCTION, PHASE II: \$200,000

Both skylights in City Hall were reconstructed to prevent the penetration by pieces of falling granite. Phase I of this project restored the granite and terra cotta above the skylights. Completed in May 1977.

B. EXTERIOR MASONRY RESTORATION, PHASE III: \$192,000

This project is the restoration of the masonry for two facades of the City Hall.

The remaining two facades will be funded at a later date. This job is held up pending a review of the parapet ordinance with respect to the City Hall.

- C. SECURITY ALARM SYSTEM, MUNICIPAL AND SUPERIOR COURTS, CITY HALL. \$60,000

The alarm system will be similar to the system at the Hall of Justice courtrooms. Project will be advertised in November 1977.

## IX. LIBRARIES

Many of the branch libraries are being renovated to provide additional neighborhood facilities for community activities such as movies, lectures, classes and meetings.

- A. ALTERATIONS TO CHINATOWN BRANCH LIBRARY, \$165,000  
project will be advertised in September 1977.
- B. ALTERATIONS TO PARK BRANCH LIBRARY, project \$146,000  
will be advertised in October 1977.
- C. ALTERATIONS TO NOE VALLEY BRANCH LIBRARY, \$150,000  
bids were received in August 1977 and exceeded estimate. Drawings will have to be revised and project readvertised.
- D. ALTERATIONS TO NOE VALLEY BRANCH LIBRARY, \$11,000  
bids were received in May 1977.
- E. NEW GATE FOR NOE VALLEY BRANCH LIBRARY, \$5,000  
bids were received in June 1977.

- X. YOUTH GUIDANCE CENTER \$100,000

Cottage Renovation B-3, B-4 and C-2, preliminary plans are underway.

- XI. COMMUNITY COLLEGE \$160,000

Central Shops Addition, a warehouse has been purchased by the City to relocate the City College maintenance shops to larger facilities. Preliminary plans are underway.

- XII. RENOVATIONS TO SOCIAL SERVICES BUILDING \$160,000  
150 Otis Street

Alterations to the first and second floors are necessary to accommodate a shift of public service, preliminary plans are underway.

#### XIII. HALL OF JUSTICE ADDITION

Two floors of courtrooms will be added over the Coroner's wing; this project will be federally funded under the Local Public Works Act. Project will be advertised as soon as funds are approved. \$5,000,000

#### XIV. REMOVAL OF PHYSICAL BARRIERS

This Division is involved in a long range program to remove physical barriers which may impede the mobility of elderly and handicapped persons in public buildings.

##### A. PROJECTS COMPLETED

1. Toilet Facilities for the Handicapped City Hall, completed June, 1976. \$9,500

##### B. PROJECTS UNDER CONSTRUCTION

1. Toilet Facilities for the Handicapped War Memorial Opera House. \$9,000
2. Toilet Facilities for the Handicapped War Memorial Veteran's Bldg., Main Library, Hall of Justice, Steinhart Aquarium, bids received August 1977. \$50,000

##### C. PROJECTS IN THE PLANNING STAGE

1. Entrance Ramps Main Library \$50,000
2. Removal of Handicapped Barriers Various Branch Libraries \$115,000
3. Removal of Handicapped Barriers Various Recreation and Park Buildings \$100,000

#### XV. REMOVAL OF BROOKS HALL AND CIVIC AUDITORIUM

A study has been made to determine the extent and cost for partial renovation of Brooks Hall and Civic Auditorium. It has been over 15 years since the last major work has been completed, and it is apparent that many of the existing building finishes, furnishings and equipments require replacement.

#### XVI. WASTEWATER PROJECTS

This Division is providing architectural services to the Bureau of Sanitary Engineering in implementing the Wastewater Master Plan in compliance with directives





Left: New Station House  
for Engine Co. 3. Below:  
Model of the Pretreatment  
Building which will be  
built as part of the  
Southwest Water Pollution  
Control Plant expansion.



from the California Regional Water Quality Control Board. These buildings pump and divert sewage flow during dry and wet weather conditions and treat the wastewater to reduce the quantities of debris, toxicity, grease and oil being discharged to the environment.

A. PROJECTS UNDER CONSTRUCTION

1. Channel Pumping Station, \$13,000,000.  
bids were received in June, 1976 and  
construction started in October, 1976.
2. North Shore Pumping Station and \$14,000,000  
Chlorine Receiving Building, bids  
were received in June, 1977.

B. PROJECTS IN THE PLANNING STAGE

The following buildings are part of the new Southeast Water Pollution Control Plant Expansion. Contract documents are in the final stages of review and the project will be advertised in early 1978 for construction bids.

1. Pretreatment Building \$10,500,000
2. Sedimentation Building No. 3 \$6,500,000
3. Digester Heating Boiler House \$1,082,000
4. Sedimentation Control Room Renovation, \$62,000  
Facility 043

CONSTRUCTION MANAGEMENT DIVISION

The Construction Management Division has prime responsibility for Contract Administration for all projects in and during the Construction Phase. The responsibility of this division includes direction of construction inspection to assure conformance with contract documents, progress verification of contract work, approval and processing of contract modifications, approval of contract payment requests and certification of completion. The Construction Management Division is also responsible for investigating contract claims and recommending their disposition.

The Construction Management Division is directed by a Senior Architect and is assisted by Architectural Administrators who are responsible for Construction Administration, and a Chief Building Inspector who supervises the activities of the Project Building Inspectors.

I. DEPARTMENT OF SOCIAL SERVICES

The New Administration Building at 170 Otis Street, a seven

million dollar project, is presently under construction. The project commenced in March of 1976 and is scheduled to be completed in April of 1978.

## II. NORTH OF MARKET SENIOR SERVICE CENTER BUILDING

This building located at 333 Turk Street was purchased by the Department of Public Health to replace the facility presently located in the YMCA building at 121 Leavenworth Street. The building is presently being renovated at the cost of \$160,000. This project commenced in February 22, 1977 and is estimated for completion in September 1977.

## LOCAL PUBLIC WORKS PROJECTS

During the fiscal year Congress enacted the 1976 and 1977 Local Public Works Capital Development and Investment Acts which provide grants to local governments to stimulate employment opportunities through construction and renovation of public facilities.

### I. 1976 LOCAL PUBLIC WORKS PROGRAM

A Federal grant of \$3,212,500 was approved for construction work at Laguna Honda Hospital. The work includes the construction of an exterior steel stair from the third floor employee's dining room to grade and the alterations of Clarendon Hall into a skilled nursing facility. In order to meet on-site requirements, the work is divided into three projects. The first project is the exterior stair and is 62% complete. The second project is the interior demolition of Clarendon Hall with work to start mid July, 1977. The third project is the alteration of Clarendon Hall with work scheduled to start December, 1977.

### II. 1977 LOCAL PUBLIC WORKS PROGRAM

Applications for nine construction and renovation projects were prepared and submitted to the Federal Government for review and approval. The projects and the funds requested are:

1. Hall of Justice Construction of Additional Courtrooms	\$5,000,000
2. Senior Citizens' Center Renovation and Alteration	171,344
3. War Memorial Opera House Addition	4,003,000
4. Old South San Francisco Opera House Additional Plaza Development	493,100
5. Laguna Honda Hospital Life Safety Improvements	825,000

6.	Academy of Sciences Alterations to Junior Academy	\$240,800
7.	San Francisco Medical Center Library Expansion	454,400
8.	Various Locations Elevator Alterations	630,500
9.	San Francisco Medical Center Corridor Wall Guards Installation	335,000
	TOTAL	<u>\$12,153,144</u>

## BUREAU OF ARCHITECTURE

Supervisory Personnel  
as of June 30, 1977

City Architect . . . . .Norman M. Karasick

Assistant City Architect . . . . .John R. Wilkinson

### ADMINISTRATION

Management Assistant . . . . .Richard A. DeMartini

### HEALTH AND EDUCATION FACILITIES DIVISION

Principal Architect and Division Head .Robert J. Malerbi

Senior Architect . . . . .Harry J. Squeri

Senior Architect . . . . .Orlando Orlandi

Architect. . . . .Gene Gee

Architect. . . . .Peter I. Pira

Architectural Associate II . . . . .Richard Leong

Architectural Administrator. . . . .Robert Jung

Chief Building Inspector . . . . .Stanley Spears

### MISCELLANEOUS FACILITIES DIVISION

Senior Architect and Division Head . . .Arthur Lee

Senior Architect . . . . .Robert O. Appleton

Architect. . . . .Albino D. Giusto

Architect. . . . .Richard B. Von Hungen Groth

Architect. . . . .Verl Hall

Architectural Associate II . . . . .Jane Gee

Architectural Administrator. . . . .Irving Jarkovsky

### CONSTRUCTION MANAGEMENT DIVISION

Senior Architect and Division Head . . .A. Shura Fadeff

Architectural Administrator. . . . .Lawrence Young

Architectural Administrator. . . . .Malcolm C. Dong

Chief Building Inspector . . . . .Robert J. O'Connell

ORGANIZATION CHART  
BUREAU OF SANITARY ENGINEERING  
DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1977

BUREAU CHIEF

SPECIAL ASSIGNMENTS

ADMINISTRATIVE DIVISION

1. Special Assignments

GENERAL SERVICES DIVISION

1. Programs and Budgets
2. Office Services
3. Support Services

INDUSTRIAL WASTE CONTROL  
DIVISION

1. Surveillance & Enforcement
2. Chemical Resources
3. Monitoring
4. Revenue

MECHANICAL ENGINEERING  
DIVISION

1. Waste Treatment Design
2. Pumping Stations
3. Special Projects

WASTEWATER FLOW CONTROL  
DIVISION

1. Design
2. Hydrology
3. Sewer Design and Investigation

WASTEWATER QUALITY CONTROL  
DIVISION

1. Waste Treatment Design
2. Planning and Studies
3. Special Assignments

# 1976-77

## I. INTRODUCTION

**8 million more for billion-dollar sewer**

**Ocean Beach's case against big sewer plan**

**S.F. Shifting Sand at the Seashore**

**Great Highway plan**

**Sewer revisions placate foes**

**Massive sewer bond issue goes on ballot**

**The great sewer debate**

**Sewage plant site OK'd**

**Preliminary report**

**Furious sewer debate**

**Plan to pay for sewers**

**A Park Plan for the Battered Beach**

**City's sewer ban lifted**

**Great highway meeting tonight**

**Cabin Laundries in the Winger**

**Neighbors' opposition**



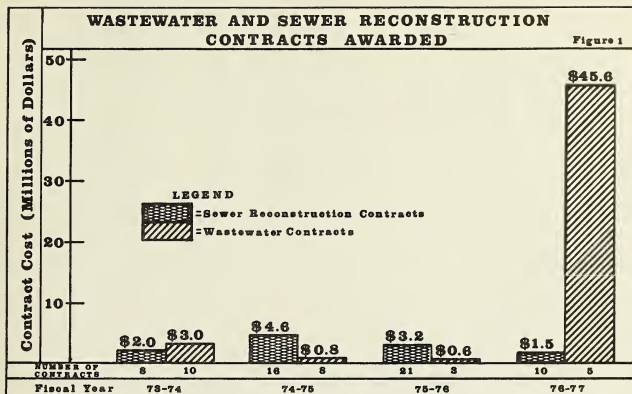


Figure 1. A comparison chart showing the amount and number of Wastewater and sewer Reconstruction contracts awarded each fiscal year.

Working in conjunction with the Bureau of Engineering, the Bureau of Architecture, and consultant engineering firms, the Bureau of Sanitary Engineering performed the following work in the past fiscal year:

	Projects Being Planned (million)	Projects Being Designed (million)	Projects Being Constructed (million)
Began Work	\$380	\$100	\$ 47
Continued Work	1	46	5
Completed Work	0	\$382	0
	<u>\$381</u>	<u>\$528</u>	<u>\$ 52</u>

The \$47 million in construction contract awards is approximately ten times the amount of contracts awarded in any previous year (See Figure 1).

Progress in each of the three key programs of the Bureau is described in subsequent sections.









## II. WASTEWATER PROGRAM

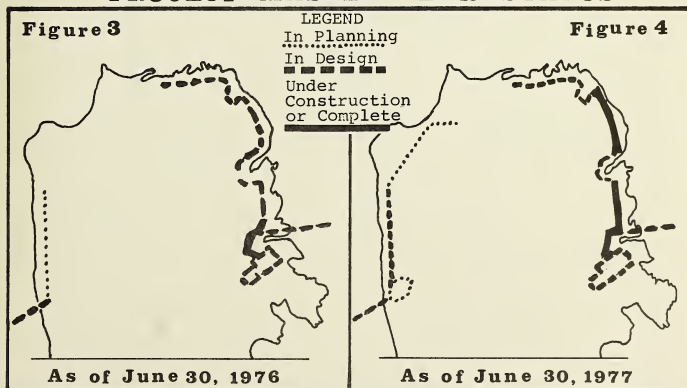
The first of the three major responsibilities of the Bureau of Sanitary Engineering is planning and design of the Wastewater Program. San Francisco has a combined sewage system which carries sewage and rainwater in the same conduits. During periods of rainfall, the capacity of the system is exceeded and a combination of rainwater and raw sewage overflows into the Bay and Ocean. Furthermore, even in periods of dry weather, San Francisco's water pollution control plants provide only primary sewage treatment (removal of approximately 50% of pollutants) instead of the required secondary treatment (removal of about 90% of pollutants).

To relieve the problem of overflows, a series of large interceptor sewers will be built around the perimeter of the City. These sewers are designed to retain rainwater/sewage until storms abate and the treatment plants can once again handle the flows.

To update the level of treatment, the existing Southeast Water Pollution Control Plant will be expanded and upgraded to provide secondary treatment for all dry weather flows from the easterly side of the City. A new plant, the Southwest Water Pollution Control Plant, is being planned for an area south of the zoo. The final site selected will be subject to the approval of the Board of Supervisors. This plant will treat dry and wet weather flows from the east side of the City as well.

Figure 2 shows Wastewater Master Plan facilities as presently

### PROJECT MASTER PLAN STATUS



Figures 2 and 3. A comparison of Wastewater projects underway during fiscal year 1976-77. The two maps indicate the phases in which various projects were at the start and completion of the year.

envisioned. Figures 3 and 4 show how Master Plan implementation progressed during the last fiscal year.

The Master Plan's initial focus has been on design and construction of facilities in the east side of the City. Under the "Accelerated Program" described in last year's annual report, three major interceptor sewers (North Shore, Channel, and Islais Creek Outfalls Consolidations) and two pump stations (Channel and North Shore) were designed. During the 1976-77 fiscal year, five of the eleven contracts, totaling \$45.7 million in construction costs, were awarded to low bidders. Bids received came in substantially below the engineers' estimates.

Figure 5 summarizes the Bureau's wastewater program activities during the 1976-77 fiscal year. The Bureau's efforts centered on design of the Southeast Water Pollution Control Plant, the West Side Transport, the Southwest Ocean Outfall and final design of the Accelerated Program Facilities.

# Wastewater Program Activities

Comparison of Work Performed in F.Y. 1976-77 with Prior Years

CODE	PROJECT DESCRIPTION	Estimated Proj. Cost	Planning	Design	Construction
NFX	NORTH POINT CROWSTOWN TRANSPORT	2.1			40% 80%
NFX 3A	MARIPOSA ARMY FORCE MAIN	1.1			40% 100%
NFX 3B	ARMY-EVANS FORCE MAIN		Part of SEWPCP	Expansion (SE 4)	
NFX 3C	EVANS-SEWPCP FORCE MAIN				
NFX	CHANNEL-MARIPOSA FORCE MAIN	1.4			25% 100%
NFX	CHANNEL PUMP STATION	14.2		50%	25%
NFX	SEWER MODIFICATIONS	1.0	0%		
N1	NORTH SHORE OUTFALL CONSOLIDATION FACILITIES				
N1	FORT MASON TUNNEL	22	100%	10%	
N2	NORTH POINT STREET	24	100%	10%	
N3	NORTH EMBARCADERO	19.3		85%	100%
N4	MALINA	13		50%	85%
N5	NORTH SHORE PUMP STATION	16.5		98%	100%
C1	CHANNEL OUTFALLS CONSOLIDATION FACILITIES				
C2	BEARY STREET	11.1		85%	2%
C3	KING STREET	5.5		85%	100%
C4	SOUTH EMBARCADERO	10.2		85%	100%
C5	SOUTH SIDE	4.5		85%	100%
IC1	ISLAIS CREEK OUTFALLS CONSOLIDATION FACILITIES				
IC1	ISLAIS CREEK	8.4		85%	100%
W1	WEST SIDE TRANSPORT FACILITIES				
W1R	SOUTH OF FULTON	0.2	100%		
W1A	PUMP STATION - SANTIAGO	30		11%	90%
W1B	SANTIAGO-NORIEGA	27		11%	90%
W2	NORIEGA-LINCOLN	30		11%	85%
W3	LINCOLN-FULTON	10		11%	80%
W4	PUMP STATION	36		2%	85%
W5	NORTH OF FULTON	1	0%		
W5	RICHMOND TUNNEL	55	25%		
W7	W7 FINAL OPERATIONAL COMPONENT	3	0%		
WH	GREY HIGHWAY RECONSTRUCTION	unknown	80%		
001	SOUTHWEST OCEAN OUTFALL	100	100%	10%	
R1	RICHMOND SUNSET WATER POLLUTION CONTROL PLANT				
R1	DECHLORINATION	0.3		100%	70%
R2	DIGESTER DOME REHABILITATION	0.1			75%
R2	INTERIM SOLIDS HANDLING	0.1			100%
SE1	SOUTHEAST WATER POLLUTION CONTROL PLANT				
SE2	EXPANSION (ONSITE WORK PFG 1)	7.5		10%	70%
SE3	EXPANSION (OFFSITE WORK PFG 2)	184		15%	80%
SE4	EXPANSION (SE & GRILL TRACK PFG 3)	7		15%	80%
SE5	DECHLORINATION	3		100%	
SE6	INTERIM ODSR CONTROL FACILITY	0.4			10%
SE7	INTERIM ODSR CONTROL FACILITY	0.4			80%
SW1	SOUTHWEST WATER POLLUTION CONTROL PLANT				
SW1	SOUTHWEST PLANT	302	1%		
	BAYSIDE FACILITIES				
	FACILITIES PLANNING (GENERAL)	0.1	30%		
	FACILITIES PLANNING	4	0%		

## LEGEND

Work Done In Previous Fiscal Years  
Work Done During 1976-77

Figure 5

\*Cost Estimated in \$ Millions



# WASTEWATER PROGRAM: SIGNIFICANT ACTIVITIES

1. "ACCELERATED PROGRAM": North Shore Outfalls Consolidation, North Shore Pump Station, Channel Outfalls Consolidation, Islais Creek Outfalls Consolidation; and Channel Pump Station.

Figure 6 shows the status of the Accelerated Program and the Channel Pump Station:

STATUS OF ACCELERATED PROGRAM  
(AS OF JUNE 30, 1977)

Construction Contract	Est. Cost (Mil.\$)	Low Bid (Mil.\$)	Contractor	Award Date	Constr. Start Date	Constr. Comp. Date
<u>NORTH SHORE OUTFALLS CONSOLIDATION</u>						
N-1 Fort Mason Tunnel	\$18.0	-		7-78	8-78	2-81
N-2 North Point Street	20.0	-		7-78	9-78	3-81
N-3 North Embarcadero	19.0	\$11.7	Granite-Yamanishi	5-77	6-77	8-79
N-4 Marina	13.6			12-77		
N-5 North Shore Pump Station	17.5			9-77	11-77	5-80
<u>CHANNEL OUTFALLS CONSOLIDATION</u>						
C-1 Berry	17.0	8.9	Don Caputo Co.	4-77	6-77	5-79
C-2 King	11.9	4.7	Olsen-Francis	6-77	7-77	3-79
C-3 South Embarcadero	10.5			7-77	9-77	11-79
C-4 South Side	3.8			9-77	10-77	8-79
<u>ISLAIS CREEK OUTFALLS CONSOLIDATION</u>						
IC-1 South Side	12.9	7.1	Kiewit-Transbay	6-77	8-77	7-79
<u>NORTH POINT CROSSTOWN TRANSPORT</u>						
NPX-6 Channel Pump Station	19.3	13.2	Cahill	8-76	10-76	4-79
TOTAL	\$163.5	\$45.6				

Figure 6

## A. North Shore Outfalls Consolidation and Pump Station

Running along the northern waterfront and Embarcadero, the North Shore Outfalls Consolidation will collect and transport dry weather flow as well as store wet weather flow for later treatment and subsequent disposal. These sewers will be large covered concrete channels with sufficient storage capacity to reduce the number of untreated overflows into this section of the Bay to an average of one per year. The pump station will pump collected flows to the Channel Pump Station and from there to the Southeast Water Pollution Control Plant for treatment.

Contracts N1 and N2 are being redesigned to take advantage of new tunneling techniques developed in Japan. Use of tunnels instead of the open excavations originally proposed will greatly lessen the impact of construction on the Fisherman's

Wharf area. Contractors will be required to demonstrate their ability to effectively and safely construct the proposed tunnel by a proven soft ground slurry shield tunneling method before being allowed to bid on the project. The contract will be advertised for bids in March 1978.

To test the viability of the North Shore Pump Station design, a hydraulic model was prepared to observe actual flow effects. As the hydraulic modeling progressed, certain phenomena were observed indicating that the transport storage structure should also be modeled. A contract was negotiated to build a 1:36 scale model of the structure (Figure 7). The resulting model, made of lucite so that hydraulic phenomena were visible, is over 200 feet long.

When hydraulic testing began, pressures developed in the model which would have pushed water in the actual system 93 feet into the air. Changes to the design were made, including a major venting structure, a surge chamber and the installation of struts in the structure to block the passage of waves up and down the system. Pressures are now controlled to keep water surges below street level.

The model also showed that flow distributions in a major junction structure joining the Marina District and the Embarcadero District were such that solids would have settled to create various maintenance problems. A unique solution was developed,

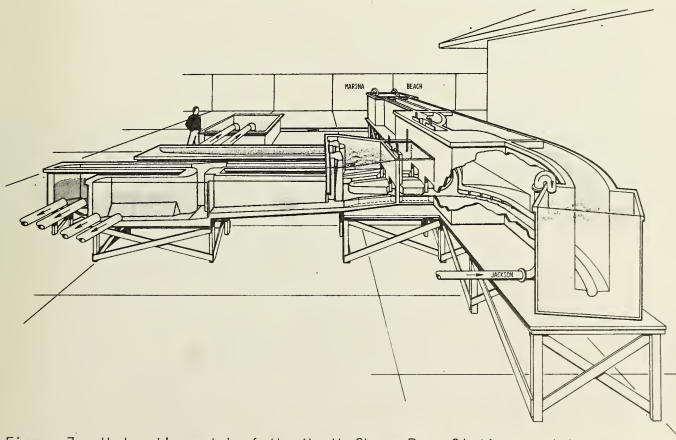


Figure 7. Hydraulic model of the North Shore Pump Station used to observe actual flow effects.

not utilized before in design of hydraulic structures. Concrete protrusions on the structure's walls were located to create a multitude of flow disturbances. The effect eliminated areas of solids deposition.

The total cost of the modeling work was approximately \$375,000.

## B. Channel Outfalls Consolidation

The Channel Outfalls Consolidation Facility serves three basic functions:

1. Transports dry weather flow originating in the tributary areas north and south of Market Street and south of Channel to the Channel Pump Station (CHPS) by gravity.
2. Transports dry weather flow pumped from the North Shore area to the Channel Pump Station.
3. Stores combined wet weather flow for four outfall systems.

## C. Channel Pump Station

The construction contract for Channel Pump Station (low bid was \$13,192,992) was certified August 30, 1976 and actual construction began shortly thereafter. The pump station, which is located at Berry and 7th Streets, has a design capacity of 141 MGD and, when the Channel Outfalls Consolidation system is complete, will pump flow from the Northeastern part of the City to the SEWPCP for treatment. Construction of the pump station should be completed in March 1979.

Figure 8 shows the fifty foot deep excavation required for the pump station.

---

Figure 8. The Channel Pump Station. The large pipes are temporary braces to support the walls during construction.



#### D. Islais Creek Outfalls Consolidation (ICOC)

The ICOC will provide transport-storage for Islais Creek outfall systems, will have the capability of transporting secondary effluent from the Southeast Water Pollution Control Plant to the East-West Crosstown Tunnel, and will transport combined wet weather flow originating from a drainage area southerly of Islais Creek to the East-West Crosstown Tunnel.

#### 3. SOUTHEAST WATER POLLUTION CONTROL PLANT EXPANSION

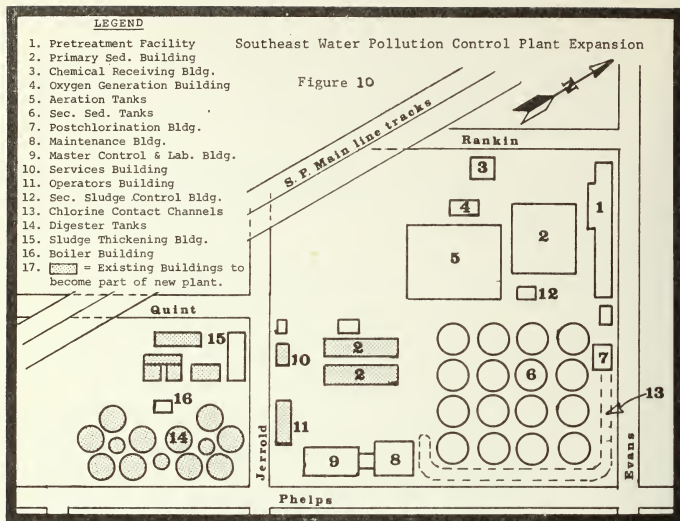
Project	Plan'g.	Design		Construction		Est. Cost
	Start	Start	Complete	Start	Complete	(\$Mil)
Onsite Contract (Pkg. "P")	10/72 *	2/76	8/77	8/78	8/82	\$171.2
Offsite Contract (Pkg. "A")	NA	NA	10/77	3/78	4/79	6.0
Drill Track Contract (Pkg. "RR")	11/76	7/76	11/77	5/78	9/78	2.8

\* SEWPCP Pilot Plant

The Southeast Water Pollution Control Plant includes those facilities necessary to treat to a secondary level sewage flows now processed at the existing Southeast and North Point water pollution control plants. Average dry weather flow design capacity for the Southeast Plant will be increased from 20 MGD (million gallons per day) to 85.4 MGD to enable secondary level treatment of the entire eastern half of the City. Present planning is to dispose of the solids residue (sludge) from the treatment processes at acceptable landfill disposal sites pending completion of a Bay Area-wide sludge study now underway.



Figure 9. An artist's rendering of part of the expanded Southeast Water Pollution Control Plant. The view looks northwest along Evans Avenue with the post-chlorination building in the foreground and the dual pre-treatment structures toward the background.



The Southeast plant layout (Figure 10) is extremely compact because of the limited 46 acre site. This was the governing factor in establishing the facilities' final configuration as well as influencing the type of process selected. Community facilities, which may include recreational, instructional, and/or a park-type development, will be designed and constructed adjacent to the plant site.

Contract documents consisting of over 1,800 contract plans and 10 volumes of contract specifications were prepared by a design team consisting of three City bureaus (Bureau of Sanitary Engineering, Bureau of Engineering, and the Bureau of Architecture), the engineering firm of CH2M-Hill, and the architectural firm of Hardison and Komatsu Associates. The Bureau of Sanitary Engineering's functions included the process and mechanical design of those facilities under the City's responsibility, coordination and liaison with the other two City Bureaus and the design consultants, and monitoring of the design consultant contracts.

Operating under an extremely tight schedule to insure receipt of construction grant funding from the Environmental Protection Agency and the State, the Bureau completed design on schedule in

July 1977 below the originally budgeted design cost.

Three contracts are to be let for this facility - the railroad relocation work; the off-site sewer, outfall and utility work; and the on-site plant construction work. The first contract for the off-site work is scheduled for advertising in November 1977. The other two will follow within a matter of months.

Estimated construction periods for the three contracts are 126 days for the railroad work, 400 days for the off-site work, and 1,320 days for the on-site work. Completion of the work and initiation of operation of the expanded facilities is anticipated in 1982.

## 2. WESTSIDE TRANSPORT

Project	Plan'g.	Design		Construction		Est.
	Start	Start	Complete	Start	Complete	Cost (\$Mil)
W-1A, Pump Station to Santiago	10/75	NA	8/77	8/78	6/81	\$ 24
W-1B, Santiago to Noriega	10/75	NA	8/77	9/78	9/81	29
W-2, Noriega to Lincoln	10/75	NA	8/77	3/79	5/81	32
W-3, Lincoln to Fulton	10/75	NA	8/77	11/78	9/79	10
W-4, Pump Station	10/75	6/76	8/77	5/79	11/81	30
W-5, Richmond Tunnel	11/76	1/78	8/78	3/79	12/81	56

The West Side Transport Project shown in Figure 11 will consist of a large reinforced concrete box culvert (consolidation sewer) under the Upper Great Highway from Fulton Street south to Sloat Boulevard, a distance of 2.5 miles, and a proposed pump station located west of the San Francisco Zoo. The existing sewers in the project will be modified, enlarged and extended to direct flow to the consolidation sewer. Additionally, another underground transport/storage system is being planned for construction under the Richmond district. It is to intersect with the Great Highway portion at Fulton Street.

The purpose of the project is to provide storage, transport and pumping facilities to convey the dry and wet weather flows from the Richmond-Sunset drainage basin to the proposed Southwest Water Pollution Control Plant for treatment and ocean disposal. The project's 12.8 million cubic feet of storage volume will be sufficient to reduce the number of overflows of untreated sewage and storm runoff onto the Ocean Beach from approximately eighty to only once in an average year.



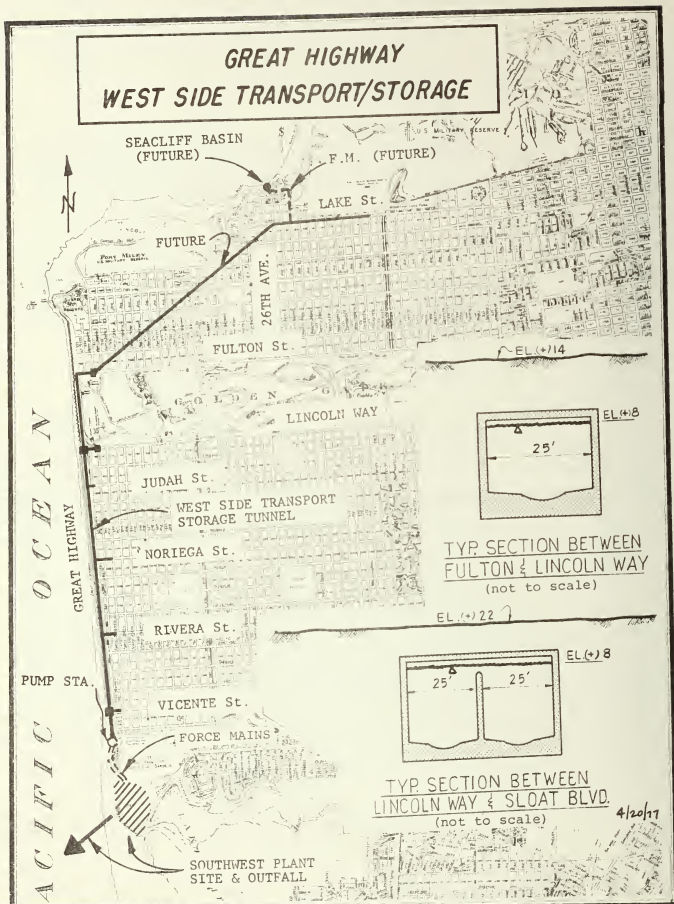


Figure 11.





Figure 12. An artist's rendering of the West Side Transport Pumping Station. The viewer looks east toward the exterior of the pump station which is topped with an open air observation deck.

Plans are being developed to convert the Upper Great Highway into a park road providing improved public access to the beach and solving the problem of wind blown sand. The Great Highway restoration work will be incorporated into the West Side Transport contracts.

Reclaimed water from the Southwest Water Pollution Control Plant will be used to wash down the inside of the sewer, and, subject to Public Health approval, irrigate the proposed Upper Great Highway landscaping areas, and provide irrigation water to Golden Gate Park.

The West Side Pump Station, shown in Figure 12, will drain the West Side Transport System into the Southwest Water Pollution Control Plant. Separate dry weather (DW) and wet weather (WW) sewage pumps of 37 MGD and 440 MGD capacity respectively will provide facilities to lift the sewage fifty-three feet and pump it to the Southwest Water Pollution Control Plant.

The station will be essentially concealed beneath a sand embankment. The roof will be developed to provide an observation deck available to the public for an unobstructed view of the ocean beach and adjacent seascape. Embankment will be landscaped to mitigate sand erosion and stabilize surface slopes.

The West Side Pump Station was designed by a consultant, Kennedy Engineers. Sanitary Engineering's role was to monitor the design submittals to insure compliance with guidelines and compatibility with other pump stations designed under the Master Plan.

#### 4. SOUTHWEST OCEAN OUTFALL

Project	Plan'g. Start	Design		Construction		Est. Cost (\$Mil)
		Start	Complete	Start	Complete	
Southwest Ocean Outfall	9/71	11/75	9/78	12/78	4/82	\$100

Planning for this project was described in the 1975-76 Annual Report. In December, 1976, the firm Parsons, Brinckerhoff, Quade & Douglas, Inc. (PBQ&D) of San Francisco was retained as the prime consultant for the project.

Efforts to date have focused on the initiation of the early field programs, including the offshore oceanographic, water quality, and geotechnical exploration programs. The offshore geotechnical exploration has included the use of an offshore drilling platform called Spider II and a drilling ship, Caldrill I. (See figures 13 & 14). The boring samples from the platform, the drilling ship, and the onshore areas provided data on such



Figures 13 and 14. The preliminary design work for the Southwest Ocean Outfall requires that oceanographic and geotechnical studies be conducted. A ship, the Caldrill I, and a drilling platform, the Spider II, enabled crews to work in the Pacific Ocean.

items as soil types, densities, and liquefaction potential along the path of the outfall. The program also includes side-scan sonar, fathometer, magnetometer, and other tests conducted on board a second ship for the purpose of determining ocean bottom compositions, seismic characteristics, and other geotechnical conditions in the entire 36-square mile study area. These data will provide a base of design information for seismic and foundation designs for the Outfall structures.

The physical oceanographic studies (i.e. current meter, density profiles, sediment transport and other oceanographic testing) are conducted to determine the nature of the wave, current, and circulation patterns in the study area. These studies will provide data to ensure a desirable effluent discharge location and pattern.

PBQ&D has overall responsibility for the management and execution of technical work under the contract, with major assistance in various technical tasks provided by the firms of CH2M-Hill, Inc., and Woodward-Clyde Consultants as subcontractors. In addition, PBQ&D calls upon the expertise of several noted authorities on seismic design problems, ocean construction methods, outfall design, wastewater discharge dispersion behavior, and other specific technical requirements, including Dr. Norman H. Brooks of the California Institute of Technology, and Ben C. Gerwick, Dr. H. Bolton Seed, Dr. Bruce Bolt and J. W. Johnson of the University of California. The project involves a contract cost of \$7,767,832 for planning and design work and \$89 million estimated for construction costs.

Based on preliminary information, a scheme has been recommended involving an outfall comprised of four pipes (2-11½ feet dia. pipes, one 8½ feet dia. pipe and one 5 feet dia. pipe) bundled together to form a single structure. The multiple pipes will allow proper diffusion rates as various other projects are constructed and will discharge both wet and dry weather flows. Figure 15 shows the proposed location for the outfall.

The most difficult section of the outfall to construct will be through the surf zone from the shoreline to about 4,000 feet from shore. Through this section only two alternatives remain feasible. The first alternative involves constructing a trestle with a

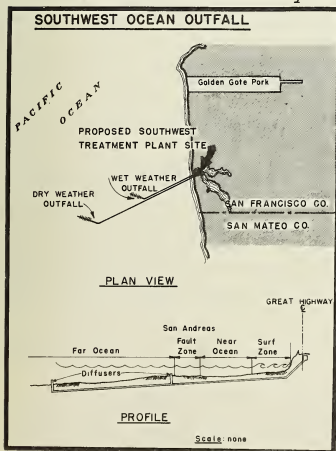


Figure 15.

cofferdam to keep the wave action from filling the pipe trench with sand. After the pipe is in place and backfilled the trestle and the cofferdam will be removed. The second alternative is to cross under the surf zone with a tunnel, constructed by slurry mole techniques.

The Bureau of Sanitary Engineering is performing in an overview capacity by monitoring cost and work product, coordinating with other agencies and other projects, supplying information to the consultants, and by guiding the consultant with policy and specific decisions. The Bureau has also applied for and received a grant in the amount of \$6,108,750 to pay the State (12½%) and Federal (75%) share of the design work.

##### 5. SOUTHWEST WATER POLLUTION CONTROL PLANT

Project	Plan'g.		Design	Construction		Est.
	Start	Start	Complete	Start	Complete	Cost (\$Mil)
Southwest WPCP	4/76	10/78	5/80	9/80	4/84	\$303.0

This project and the events leading to its formal inception this year have been reported on in previous Annual Reports (1975-75, 1974-75). The 1975-76 Annual Report noted that a private consultant would be retained to perform the facility planning effort. Subsequently the City advertised for proposals and received nine responses. The firm of Metcalf & Eddy, Inc. was selected to prepare the facility plan, and a contract of \$2,656,065 was negotiated for engineering services. The contract was awarded in May 1977. The Bureau of Sanitary Engineering has applied for and received a grant in the amount of \$1,887,500 to pay the State (12½%) and Federal (75%) of the planning work.

The planning phase of this project will last about 18 months and culminate with definitive recommendations for complying with requirements for the elimination of Bay and Ocean pollution from sewage and stormwater runoff. The project represents the cornerstone of the City's efforts to continue with its clean water program and is intended to provide the many answers necessary for decision making. The study will incorporate the facilities described elsewhere in this Annual Report as a part of the overall City Program.

The following are representative of the questions to be addressed:

1. What are the impacts of Federal, State and Regional water pollution control laws and regulations on the study--timing, degree and type of treatment/control, funding, enforcement?

2. What are the benefits to be expected through plan implementation--local and regional? What new problems may be created?
3. What are the options available to bringing remaining dry and wet weather discharges into compliance with State and Federal requirements?
4. How flexible or inflexible are the siting options for re-maining facilities, and what can be done to assure they are good neighbors?
5. Because uncertainties will continue to exist with respect to funding, siting and degree of need, how can flexibility be maintained in the program so that whatever is constructed can be utilized to the fullest extent?
6. How might conservation practices and wastewater reclamation potentials affect planning decisions? Will the new facilities provide water of a quality which can be reclaimed?

Initial studies have determined that the treatment plant should be at an elevation of 50 feet, City Datum, to minimize influent pumping needs and to operate without an effluent pump station. Potential plant sites are located along the periphery of the City and are being investigated. The most likely treatment plant site is located south of the Zoo, between the Great Highway and Skyline Boulevard on dedicated park land previously held for Zoo expansion (see Figures 4 & 15). The San Francisco Recreation and Park Commission has agreed to this use of the land. Dual use of the site for both sewage treatment and Zoo expansion was also approved by the voters of San Francisco in 1975, when Proposition A was passed.

Should the Southwest site be selected, the plant would provide secondary treatment for dry weather flows from the Richmond-Sunset districts, and treatment for wet weather flow from the Southeast and North Point areas. Oceanside wet weather flows would reach the plant via the West Side Transport system, while Bay side flows would reach the plant via a crosstown tunnel, operated in conjunction with transport and facilities storage located throughout the City.

Present planning is to transport all wastewater solids removed at the Southwest Plant to the Southeast Plant for treatment and disposal. Alternative systems and locations for sludge handling and disposal are to be investigated in this facility planning effort, and a City-wide sludge solids master plan will be developed.

Included in the project report will be an evaluation of the cost and effectiveness of the City's Wastewater Management Plan and other feasible alternatives, taking into account compliance with the probable requirements and policies of the State Water

Resources Control Board and the U.S. Environmental Protection Agency. The basic problems to be resolved include the size of the facility, the process alternatives available with prototype history on a comparable scale, and the problems of constructing and operating such a facility in a manner which is technically feasible and environmentally acceptable.

#### 6. AREAWIDE WET WEATHER STUDIES

Project	Plan'g. Start	Design Start	Constr. Start	Study Complt.	Cost (\$ Mil.)
Real-Time Automatic Control System	7/75	NA	NA	8/79	\$ 0.3
Rainfall Data Evaluation	7/75	NA	NA	7/80	1.2
Rainfall/Runoff Monitoring	7/70	NA	NA	6/81	2.2

##### Real-Time Automatic Control System Study-Rainfall Prediction

Real-Time Automatic Control (RTAC) is a systems approach aimed at the optimization of transport/storage and treatment capacity of wastewater control facilities.

As reported in the 1975-1976 Annual Report, the work on this project is intended to develop a control strategy and control models useful in a real-time control system. The work accomplished during the year included:

1. Comparative analysis relating data from newly installed rain gages in Marin County to data obtained from gages in San Francisco.
2. Development of a preliminary rainfall forecasting model to make short-term prediction of rain in the city possible based upon remote gage data. Predictions of rainfall amounts by this model have been as close as six percent to actual measurements.
3. Development of various reactive control strategies for the North Shore Outfall Consolidation Facility.
4. Development of computer simulation models to determine the long-term effects of various control strategies on the North Shore system.

In addition to work on the control system aspects, the investigation disclosed information leading to critical design changes in the consolidation system. Unnecessary sewer work was eliminated, portions of the system which would adversely affect operations were removed, and special required treatment was



provided for several overflow points to prevent unintended discharges.

#### Rainfall-Runoff Monitoring Program

Annual reports since 1970-71 have extensively described the rainfall-runoff data acquisition system. Installed to develop the required data for the design of Master Plan facilities, the system is slightly over five years old, but is still one of the best in existence. Improvements have been made to the central station to assist in testing and provide for ease of operation.

Two new rain gages have been installed in Marin County and tied into the system to provide real-time data enabling the analysis of lead and lag times of storm fronts approaching the city. The flow monitor stations were rewired with timing devices to eliminate a major amount of equipment overrun and failure, reducing maintenance costs. Because of reporting requirements, a major central station expansion likely will be required in the next fiscal year. A wet weather radar monitoring unit is also planned. It is contemplated this unit will be utilized in the future real-time automatic control system.

#### Rainfall Data Evaluation

Related closely to the RTAC project is the continued analysis of rainfall information obtained by the city data acquisition system. At the time of completing the report on the Master Plan for Wastewater Management, it was projected that five years of data should be obtained to have any meaningful results. Slightly over four years of data has now been obtained and even though the last two rainy seasons were abnormal, analysis can begin.

A hydrometeorological report is being prepared for the City of San Francisco based upon long-term data and data from the thirty-unit rain gage system. It has been shown consistently that the North Shore area of the city receives approximately 12 percent more rainfall than that measured by the National Weather Service. The southeasterly portion of the City receives approximately 4 percent more and the area west of Twin Peaks approximately 12 percent more. This data, as well as data from other sources, has been incorporated into the design of the transport storage structures for wet weather overflow control.



### III. SEWER RECONSTRUCTION PROGRAM

The second major responsibility of the Bureau of Sanitary Engineering is the sewer design and investigation program.

There are 870 miles of sewers in San Francisco. Of these, 160 miles are undersized and an additional estimated 110 miles are structurally unsound due to sags, misalignment, deformed shapes, or collapsed conditions. Correction of these deficiencies will occur over a thirty year period at an estimated cost in excess of \$100,000,000. Sewer bond issues are submitted to the electorate periodically to provide funds for these projects.

#### SEWER RECONSTRUCTION

The various activities undertaken in the Sewer Reconstruction Program to upgrade the sewer system are as follows:

1. Identifying structurally and hydraulically inadequate sewers by analysis of video tape of sewer interior and studies.
2. Preparing contract documents for replacement or enlargement of inadequate sewers.
3. Providing office engineering work during reconstruction of the sewers.
4. Updating sewer records for maintenance and sewer connection information.

Sewer reconstruction projects completed in the 1976-77 fiscal year are shown in Figure 16. The contract costs of these projects have been separated under the column headings of enlargement, replacement, and extension to reflect the sums expended from the general categories described in the sewer bond issues. The grand total of \$1,473,848 reflects a production average of approximately \$1/3 million for each engineer working on projects in the section. The grand total is a reduction from previous years due to reassignment of personnel to the Wastewater Program. It is intended that the reconstruction program will gradually increase to a level that will reasonably maintain the structural adequacy as well as gradually eliminate the flooding problems in the city.

#### Sewer Investigation

The sewer Investigation Program consists of the closed circuit television inspection of the sewer system and public information and plan review services.

# SEWER RECONSTRUCTION PROGRAM PROJECTS

(F.Y. 1976-77)

DESCRIPTION	ENLARGEMENTS	REPLACEMENTS	EXTENSIONS
Powell St.-Francisco to Lombard St.-Sewer Replacement		\$111,585	
Park St. at Mission St. Sewer Work		6,435	
Bush St.-Montgomery to Sansome-Sewer Lining & AWSS Work		85,307	
Sacramento St.-Pierce to Scott-Sewer Replace- ment		32,459	
Andover St.-Crescent Ave. to Newman St. Sewer Enlargement	65,941		
New St. in Block 3593			\$ 2,150
Taraval St. - 39th to 46th Ave. Sewer Enlarge & Replacement-Muni Rerailing	96,880	10,800	
Judah St.-19th to 32nd Ave. St. Improve & Track Recon		23,320	
Judah St.-32nd Ave. to La Playa St. Improve & Track Recon		38,450	
India Basin, Mendell, Newhall	708,258		292,263
TOTALS	\$871,079	\$308,356	\$294,413
GRAND TOTAL			\$1,473,848

Figure 16.



Figure 17. Inspection of old sewers via closed circuit TV.

The TV system is used to inspect the interior of small diameter sewers which cannot be inspected by walk-through methods. The continual operation of the television equipment is essential to the progressive program of maintaining, evaluating, and upgrading the City sewer system. Investigation is intended to accomplish the following objectives:

1. Insure that newly constructed sewers have been installed with straight alignment, flush side connections, and water tight joints.
2. Locate defective sewers for repair before sewage back-ups occur or the street surface collapses.
3. Assess sewer damage in the event of earthquakes.

The unit (shown in Figures 17 & 18) operates on an average of 215 of the normal 250 work days in a year. The length of sewers inspected in this FY was approximately 115,000 linear feet or 21.8 miles. This is 2.5% of the 870 miles of sewer in the City. The cost of this element of the program was approximately \$79,000 (\$40,000 from Ad Valorem and \$39,000 from Sewer Bond Issues).

Information on the 870 mile sewer system is provided to private citizens, developers, public utilities and agencies, governmental jurisdictions, and City departments. Any proposed private and public work in the vicinity of the sewer system is reviewed to insure there is no interference with the continued operation of the sewer system.

The following sewer system services were provided during the last fiscal year:

	<u>Number Processed</u>
1. Investigate and respond to flooding and complaints.	6
2. Provide sewer information to the general public requiring written replies. (Numerous telephone inquiries are not included in the number processed).	60



Figure 18. Television inspection of sewers using a camera which travels through the sewers from one manhole to the next.

3. Prepare side sewer informational sheets for the public in obtaining side sewer permits. 202
4. Respond to requests for review of plans, specifications, street variations, sewer encroachments, shoring and excavations, steam connections, street occupancies, sales of surplus property, sewer easements, and sewer connections. 62
5. Review, check, and approve plans and specifications for the City's Redevelopment Agency projects. 7

The cost of this element of the program was approximately \$41,000 from Ad Valorem funds.

## SECTION IV. INDUSTRIAL WASTE PROGRAM

The third major responsibility of the Bureau of Sanitary Engineering is the Industrial Waste Program. The Industrial Waste Division is responsible for planning and implementing an industrial waste source control program and implementing the wastewater revenue program. These ongoing activities are funded by ad valorem taxes with partial reimbursement from Federal and State grants.

### SOURCE CONTROL

The Source Control Program regulates industrial waste discharges into the City's sewerage system to protect the system and its operation and maintenance personnel and to enable the City's water pollution control plants to comply with discharge permit requirements. The program consists of enforcing:

1. Ordinance limitations on pH, dissolved sulfides, chemical oxygen demand and grease/oil,
2. Heavy metal requirements adopted by the Director of Public Works,
3. Prohibited discharges such as flammable or explosive materials which can obstruct, injure, or otherwise interfere with the proper operation and maintenance of the sewerage system, and

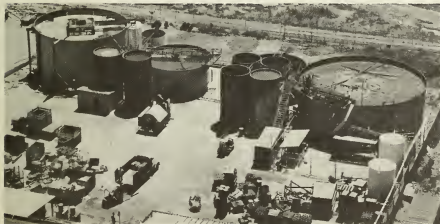


Figure 19. A private industrial waste pre-treatment facility.

4. Environmental Protection Agency pretreatment standards where applicable to industry in San Francisco.

During the last year, the primary thrust was placed on reducing the heavy metals in the treatment plant influents by enforcing a heavy metals source control program and revising the Industrial Waste Ordinance.

San Francisco's heavy metals source control program requires industry to remove as much heavy metals (arsenic, cadmium, total chromium, copper, lead, mercury, nickel, silver, zinc) as practicable.

During the year, the Industrial Waste staff worked with 323 industrial waste dischargers in 19 different industrial classifications who had been issued Department of Public Works Orders to reduce their heavy metals discharge. Industrial group conferences were held with representatives of dischargers in order to explain the program and to answer their questions. This encouraged industry to cooperate with each other in finding common solutions to their pollution problems. Industrial Waste staff made periodic inspections, monitoring the dischargers' progress. Since the initiation of the program early in 1976, significant reductions in the mass of heavy metals entering the City's water pollution control plants have occurred.

Despite these reductions in heavy metals in the treatment plants' influents, the plants' effluents presently do not conform to the future NPDES Permit requirements for total chromium and nickel on the combined North Point-Southeast effluent and for total chromium and mercury on the Richmond-Sunset effluent. The division will continue in its efforts to reduce the industrial heavy metal contribution in the coming year. Particular attention will be given to large, short duration discharges which may adversely affect the present or future treatment processes.

COMPARATIVE REDUCTION OF HEAVY METALS IN SAN FRANCISCO WASTEWATER (1976 to 1977)		
Heavy Metal	Percent Reduction	
	North Point, Southeast Plants	Richmond-Sunset Plant
Cadmium	47%	80%
Copper	15%	75%
Mercury	16%	75%
Silver	15%	69%
Chromium	77%	90%
Lead	14%	91%
Nickel	52%	48%
Zinc	63%	67%

Figure 20.

## ORDINANCE REVISION

During the year, staff recommendations for revising the Industrial Waste Ordinance were completed. The recommended revisions took into consideration the City's NPDES Permit requirements and suggestions made by the staff of the Regional Water Quality Control Board. In addition, every effort was made to simplify and organize the Ordinance so that it would be more easily understood by the public. All revenue provisions were transferred to an Ordinance providing for user charges. During the year, the staff, with the cooperation of the Chamber of Commerce, met with industrial representatives and explained the recommended revisions and the effect they would have on industry.

The recommended revisions were presented to the Board of Supervisors who conducted public hearings and adopted them in Ordinance No. 199-77 on June 6, 1977. The Ordinance was signed by the Mayor on June 8, 1977.

## REVENUE

The 1976-77 revenue program consisted of a sewer service charge, an industrial waste surcharge, and an annual industrial waste inspection fee. During the year, complaints and inquiries from the public about sewer service charges were received and resolved. Reminder notices were sent to delinquent accounts for collection. The total revenues collected from the service charges in fiscal year 1976-77 were as follows:

Sewer Service Charge	\$ 5,727,231
Industrial Waste Surcharge	321,615
Industrial Waste Inspection Fee	<u>61,416</u>
Total	\$ 6,110,262



Figure 21. Sanitary Engineering Technicians preparing to install a sewage sampler down a manhole. The sampler retains small quantities of sewage for later analysis.



This represented roughly 30% of the total cost of the sewerage system. The balance of funds were provided by ad valorem taxes. To continue to receive Federal and State grant funding, San Francisco was required by July 1, 1977, to adopt and implement a revised revenue program based on sewer service charges which would produce sufficient revenue to meet the sewerage system's annual costs of operation and maintenance, debt service, and replacement. Stone and Youngberg, a municipal consultant firm, was retained to evaluate State and Federal sewer revenue program regulations, current revenue information, and projected revenue requirements and propose a methodology for establishing an acceptable revenue program. The Stone and Youngberg report formed the basis for the new revenue program, which was submitted to the Board of Supervisors and adopted on June 13, 1977.

Under the revised program, users will be assessed according to their discharge to the sewerage system by the following rates:

Flow per one hundred (100) cubic feet of water used or by actual discharge determined:	\$0.5830 per 100 cu. ft. water used
Plus	
Suspended Solids discharged to City:	\$0.082 per lb.
Plus	
Grease/Oil discharged to City sewerage:	\$0.0131 per lb.
Plus	
Chemical oxygen demand of sewage discharge to sewerage system:	\$0.0871 per lb.

This formula amounts to a residential rate of \$0.8162 per 100 cu. ft. water used.

Whenever loadings for a particular industrial discharger have not been determined by direct measurement, they are established by sampling and analyzing a representative number of establishments (see Figure 21) within a particular industrial classification and by averaging such resultant loadings. These loadings are presented in public hearings for adoption by the Director of Public Works. Commercial loadings are established on a group basis in a similar manner. Non-residential dischargers whose loadings have not been established by sampling analysis will be charged at the residential rate until their loadings are determined.



BUREAU OF SANITARY ENGINEERING

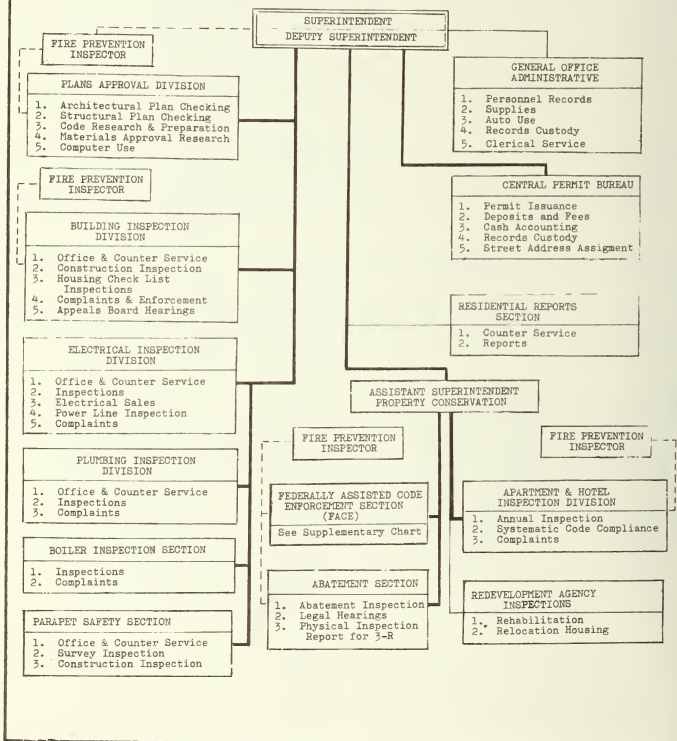
SUPERVISORY PERSONNEL

As of June 30, 1977

Alan O. Friedland, Bureau Chief

<u>DIVISION &amp; SECTION</u>	<u>PERSON IN CHARGE</u>
SPECIAL ASSIGNMENTS	W. R. Giessner, Sanitary Engineer
ADMINISTRATION	A. H. Brandow, Civil Engineer
Special Assignments	E. R. Nadres, Junior Civil Draftsman
GENERAL SERVICES	V. B. Troyan, Civil Engineer
Programs and Budgets	L. Olivari, Asst. Civil Engineer
Office Services	H. B. McElree, Sr. Management Asst.
Support Services	J. M. Miller, Sr. Management Asst.
INDUSTRIAL WASTE CONTROL	J. M. Barron, Sr. Civil Engineer
Surveill. & Enforcement	S. C. Medbery, Asst. Civil Engineer
Chemical Resources	A. J. Pezzi, Sr. Sewage Trtmt. Chemist
Monitoring	G. Ong, Asst. Civil Engineer
User Charge	D. Thompson, Jr. Administrative Analyst
MECHANICAL ENGINEERING	A. J. Rando, Sr. Mechanical Engineer
Waste Treatment	M. D. Koo, Mechanical Engineer
Pumping Stations	W. J. Flaherty, Mechanical Engineer
Special Projects	R. W. Dahl, Mechanical Engineer
WASTEWATER FLOW CONTROL	T. F. Landers, Sr. Civil Engineer
Design	D. J. Birrer, Sr. Civil Engineer
Hydrology	H. C. Coffee, Civil Engineer
Sewer Design & Invest.	J. M. Dela Cruz, Civil Engineer
WASTEWATER QUALITY CONTROL	L. A. Vagadori, Sr. Sanitary Engineer
Waste Treatment Design	D. T. Munakata, Civil Engineer
Planning and Studies	R. T. Cockburn, Sanitary Engineer
Special Assignments	M. P. Chow, Sanitary Engineer

# BUREAU OF BUILDING INSPECTION ORGANIZATION CHART JUNE 30, 1977



## BUREAU OF BUILDING INSPECTION

Robert C. Levy, Superintendent

### CONSTRUCTION ACTIVITY

This year, although the dollar value of building permits decreased substantially, the number of building permits issued increased by more than 10%. The drop in dollar value reflected the decrease in Type 1 and 2 buildings (high-rise), while the new wood frame permits and alteration permits accounted for the increase in the number of permits. The larger number of permits placed an additional burden upon our plan checking and inspection personnel, as their work load is dependent to a greater degree on the number of permits than on the size of the job. Alteration work, in fact, requires more time than comparable new work.

### STAFFING PROBLEMS

Staffing problems have been covered in the last several Annual Reports, and these problems continue to plague the Bureau.

We were successful in the recently adopted 1976-77 budget in obtaining six additional positions: one Clerk-Typist; one Boiler Inspector (to replace the Senior Boiler Inspector which had always been funded but which was deleted in the 1975-76 budget upon the incumbent's retirement); one Senior Building Inspector for our Property Conservation Division; one Senior Residential Environmental Inspector for the Division of Apartment & Hotel Inspection; one Assistant Superintendent, Administration; and a Senior Systems & Procedures Analyst. Four of these positions are covered in more detail under the following section on reorganization. While these additional positions will substantially aid the Bureau, it is expected that it will take a long period of time to hold examinations for certain of the vacancies for which there is no list. Also it is expected that a Salary Savings Program will be instituted for next year although the amount to be saved is unknown at this time. This requires deferring the filling of positions as they become vacant, or even layoffs as required, in order to save the budgeted salary funds mandated by this program. Hence it will probably be late in the fiscal year before the Bureau has all the personnel on hand which are allowed under the budget.

There are two serious problems confronting the Bureau aside from the possible Salary Savings Program. First, the delay in filling positions upon retirement. Most of our personnel have been here many years and have accumulated six months' sick leave as well as substantial vacation time. When they retire, the positions

cannot be filled until the leave and vacation time has been exhausted. In the recent case of a Chief Building Inspector, it was eight months from the time he retired until the job could be filled. With several retirements each year, this substantially reduces our staffing. The second major problem was the elimination of a mechanical engineer for plan checking of the new State energy requirements (discussed later in the report) for non-residential buildings. This will require training of our structural engineering plan checkers to handle work in which they have little background, and will reduce the time available for checking the structural engineering phases of building plans. It is most inefficient and will increase our already large backlog of work, thus delaying issuance of building permits. (This position would have been covered by plan checking fees, and would not be supported by ad valorem funds.)

### REORGANIZATION OF BUREAU OF BUILDING INSPECTION

The reorganization of the management structure of the Bureau of Building Inspection has been discussed in the past few Annual Reports. It consists of the addition of four management positions: Assistant Superintendent, Property Conservation; Assistant Superintendent, Administration; Building Code Analyst; and Senior Systems & Procedures Analyst. These positions are necessary to provide the degree of management necessary to operate the Bureau efficiently, with its ever increasing duties in connection with new State and local programs. These positions were approved in the 1974-75 budget but were frozen, and some were then deleted from subsequent budgets. The Assistant Superintendent of Property Conservation was allowed in the 1975-76 budget. The Assistant Superintendent Administrative and Senior Systems Analyst were reinstated in the 1976-77 budget just adopted. It is hoped that the Building Code Analyst will be included in the 1977-78 budget to allow the management reorganization to be completed.

### PROPOSED CODE CHANGES

In the Building, Plumbing and Electrical Codes there is a provision that the Codes be reviewed on a triennial basis and necessary changes be made to update the Codes for new technology, to remove ambiguities and include various changes mandated by the State. While this Code work requires a substantial time commitment from the top level personnel of the Bureau, it is necessary if our codes are to remain current and provide a reasonable degree of safety and health at a minimum construction cost.

We are commencing this review of the Building Code and soliciting suggestions from over 100 professional, industry, property owner, and citizen groups. We will review the Uniform Building

Code changes, as well as changes in State law and suggested changes by our staff in this update. It is hoped this review will be completed and proposed changes sent to the Board of Supervisors by the fall of 1978.

A similar review of the Electrical Code is being undertaken by the Electrical Trust. They have formed a committee of professionals, contractors, labor union personnel, and public members to update the San Francisco Electrical Code using the National Electrical Code as a model. Personnel from the Bureau will be active on this committee.

#### PRESALE INSPECTION

One of the recommendations of the Housing Rehabilitation Study, sponsored by the Department of City Planning, was the institution of a mandatory pre-sale inspection ordinance for residential property. This would require that an inspection be made of all residential buildings to determine whether or not there were any Code violations, with the inspection report furnished to the buyer prior to the transfer of such property. It is expected (although this is not yet definite) that compliance with such a report will be required, though a considerable amount of time would probably be given for the correction of non-life hazards. Indications are that this presale inspection would only be required in the sale of single and two-family dwellings, since apartment houses and hotels are regularly inspected in the Systematic Code Enforcement Program.

Discussions were proceeding at the close of the fiscal year, and it is anticipated that meetings with the affected groups will commence shortly.

In general, it is felt that this ordinance will help protect buyers from later costly repairs of which they were not aware at the time of purchase. It will also improve the housing stock with the least hardship to all parties, since the purchase price would undoubtedly reflect the cost of the work required.

#### STATE REGULATIONS

The State was active in the field of regulations which the City must adopt or enforce.

The Department of Housing and Community Development has just adopted new housing regulations which affect access requirements for the handicapped, and plumbing fixture installation, primarily in residential buildings. The Superintendent attended the hearings and was successful in obtaining modification of some of the proposed requirements so they would be more suitable for application in San Francisco. These regulations must be adopted by the State Building Standards Commission before they become effective.

The retroactive high-rise requirements promulgated by the State Fire Marshal, as reported in the last Annual Report, became effective early this year, with the Fire Department as the lead agency. These will involve joint inspections by our building inspectors with the Fire Department inspectors to determine the necessary corrections which must be made. It then requires construction review by our building, plumbing and electrical inspectors, and will put a serious additional load on them, especially in the downtown area.

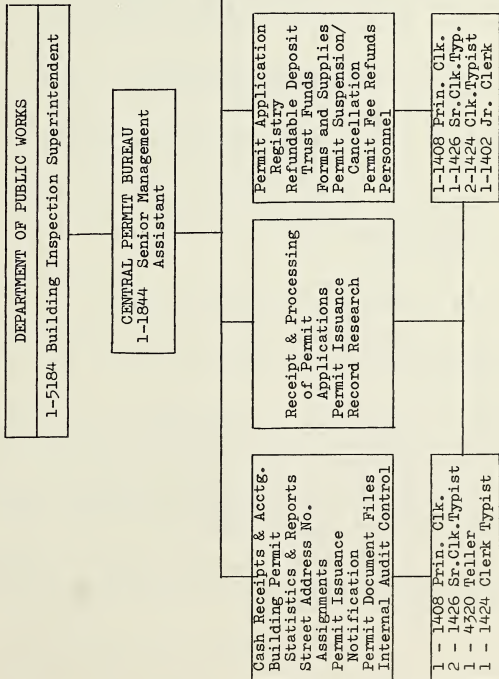
The State Fire Marshal has convened an Advisory Group, of which the Superintendent is a member, to review the life safety requirements of Title 19 as they affect new buildings. Meetings are alternated between the Bay Area and Los Angeles, and it is expected the work of the committee will be completed during the next year.

A new Energy Code has been adopted by the State Energy Commission for non-residential buildings, to be enforced by the local building inspection departments, and to be effective January 1, 1978. This is a performance code, and involves detailed energy computations by the design engineers and checking by our plan checkers. It will involve substantial additional training for plan checking, and additional complex items for review by our plan check engineers. Revisions for residential building energy requirements are also being promulgated by the State, to become effective later next year.

#### INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS ACTIVITIES

The Superintendent was active in two Code Committees of the International Conference of Building Officials. He was chairman of the committee for testing of spray-on fire protection for high-rise buildings. This group studied various proposed changes to the Uniform Building Code (upon which the San Francisco Code is modeled) and it is expected that the adoption of several of these proposals will be voted on by the organization membership at the 1978 meeting. Among these is a test for damageability of material which was developed in San Francisco. Another committee on which the Superintendent served dealt with the use of plastics in concealed spaces of major buildings, such as ceilings and walls. Several code changes were promulgated by the committee for vote for inclusion in the Uniform Code, and subsequent adoption in the San Francisco Code. It is important that the City have input into the model code work, as it forms a basis for our Code.

CENTRAL PERMIT BUREAU  
ORGANIZATION CHART  
July 1, 1977





## CENTRAL PERMIT BUREAU

The Bureau is charged with the receiving, recording and processing of applications for the various permits and licenses under the jurisdiction of the Department of Public Works, collection of the applicable fees, and issuance of the permits. Included are permits covering each aspect of the erection, the various types of signs; for the use or excavation of streets and sidewalks; and plumbing, gas appliance, boiler and electrical permits.

Departmental monetary receipts are received for deposit with the City Treasurer. Detailed accounting records are maintained as to revenue or non-revenue classification account number; records relative to receipt and refund of certain refundable deposit trust monies; records of certain Departmental receivables; and records for use in preparing of revenue estimates.

Claims for refund of permit fees paid are reviewed and processed in accordance with applicable code or other reference authorization. Uncollected receivables are transferred to the Bureau of Delinquent Revenue for further collection attempts, abandonment or compromise.

Reports prepared by the Bureau include building permit issuance statistics and divisional revenue receipts.

The Bureau maintains the official record of street addresses, which function includes assignments, changes, corrections and verifications.

Postings of notification of permit issuance are made on the premises of property affected relative to new buildings and structures, moving of buildings from one site to another, and for permits affecting a change of use of occupancy. Owners of property adjacent to a building where a permit for a structural addition has been issued are notified by mail. Permittees are notified of appeals filed at the Board of Permit Appeals and of permit suspensions and revocations.

Applicable permit documents are processed in accordance with the regulatory program requirements of the California Coastal Zone Conservation Commission.

The Bureau responds to subpoenas duces tecum by appearing at court with official records as ordered.

In compliance with requirements of the State Strong Motion Instrumentation Program, the Bureau collects a fee of 0.007 per cent of the estimated construction cost on building permits authorized for deposit in the State Treasury.

The entire record system of the Bureau of Building Inspection, including plans, building permits, job cards and DAHI files has been converted into microfilm. This system is designed to assure permanent safeguarding of records, and to make copies of such records available to the general public. Records can be examined in either film or hard copy form for a nominal fee. The microfilm system had produced, by the end of June 1977, approximately 3,451,645 document frames of the various records noted above.

#### BUILDING PERMIT SUMMARY

TYPE OF CONSTRUCTION	1975-76 NO. OF PERMITS	1976-77 NO. OF PERMITS	1975-76 ESTIMATED COST	1976-77 ESTIMATED COST
Type 1	11	13	\$ 145,090,841	\$ 27,146,956
Type 2	1	3	20,430,841	7,128,724
Type 3	2	3	230,800	1,154,689
Type 4	15	9	1,067,393	1,078,800
Type 5	491	640	46,822,157	82,491,471
Alterations	<u>10,459</u>	<u>11,467</u>	<u>70,472,424</u>	<u>87,362,764</u>
TOTAL	10,979	12,135	\$ 284,115,456	\$206,363,404

Type 1 - Steel frame, reinforced concrete, or reinforced masonry structural elements. Fire-resistive construction.

Type 2 - Similar to Type 1, but with limitations.

Type 3 - Wood frame floors with exterior walls of concrete or masonry.

Type 4 - Light incombustible frame construction.

Type 5 - Wood frame construction.

PLUMBING INSPECTION DIVISION

PERMITS AND FEES	<u>1975-76</u>	<u>1976-77</u>
Number of permits, combined work (plumbing, gas, water piping, etc.)	2333	3027
Number of permits, plumbing only	1177	1416
Number of permits, gas only	5606	4702
Number of permits, water only	2157	2172
Number of plumbing permit issuance fees paid	3170	3867
Number of gas permit issuance fees paid	2265	2579
Number of water line permit issuance fees paid	3779	4634
Number of extra charge fees	600	809
Number of reinspection charge fees	107	201
Total receipts for fiscal year	\$248,110	\$271,943

INSPECTIONS

Number of inspections made (plumbing, water, gas, etc.)	13,387	20,935
Number of jobs finalled	5209	6261
Number of lockouts	1211	1526
Number of hours spent on fee exempt work	3484	4446

COMPLAINTS AND ADJUSTMENTS

Number of complaints received	1934	1169
Number of complaint inspections	1640	2247
Number of Coroner's requests for investigations	1	0
Number of condemnation reports	63	65
Number of work without permit found (penalty work)	108	184

SEWERS

Number of building sewers installed	422	483
Number of building sewer traps replaced	60	130
Number of building sewers replaced or repaired	294	298

PLUMBING INSPECTION DIVISION

PLUMBING FIXTURES, ETC.

Number of plumbing fixtures and waste discharge	31,969	34,697
Number of sump ejectors	9	11
Number of grease interceptors	16	6
Number of rain water leaders	1089	957
Number of water outlets (over 4)	60,246	61,778

GAS INSTALLATIONS

Number of gas lines installed, 1 outlet only	2964	3429
Number of gas outlets over 1	2670	4165
Number of gas conversions	44	37
Number of warm air furnaces	2684	2107
Number of water heaters	2908	3870
Number of miscellaneous gas appliances	3674	3918

ELECTRICAL INSPECTION DIVISION

	<u>1975-76</u>	<u>1976-77</u>
Number of hours spent on fee exempt work Field & Office	5,512 hours	5,557 hours
Wiring and fixture installations inspected and completed	8,714	10,838
Sign installations inspected and completed	504	673
Pinball machine inspections	42	46
Inspections of nursing homes and boarding homes for ambulatory aged	23	44
Night clubs, public assembly, dance halls, movie theaters, etc. - inspections	63	54
Spray booth inspections	5	5
Massage parlor inspections	1	31
Specials (garages, parking lots, laundries, second-hand stores, etc.)	24	5
Citations to the District Attorney	43	51

ELECTRICAL INSPECTION DIVISION

PERMITS AND FEES	<u>1975-76</u>	<u>1976-77</u>
Permits issued, wiring	10,414	11,086
Permits issued, signs	579	854
Electrical sales, licenses registered	2,268	933
Electrical contractors, registered	766	761
Plant owners, licenses registered	31	8
Electrical wiring and fixtures, permit fees received	\$274,346.00	\$278,652.20
Electrical sign permit fees received	\$ 3,219.00	\$ 4,063.00
Electrical sales license fees received	\$ 40,700.00	\$ 25,600.00
Plant owners license fees received @ \$100.00 each	\$ 3,000.00	\$ 800.00
Total receipts for Fiscal Year	\$321,011.00	\$309,115.20

INSPECTIONS

Inspections made	28,655	31,531
Electrical surveys of multi-unit buildings for code compliances (DAHI)	738	760
Complaints investigated (found defective)	2,214	2,101
Jobs discovered without permit	86	153
Installations in progress as of June 30	5,870	5,413
Number of lockouts	1,012	1,222

MISCELLANEOUS STATISTICS

	<u>1975-76</u>	<u>1976-77</u>
Inspections reported by building inspectors	36,338	35,614
Projects remaining on which permits have been issued that have not been reported by building inspectors	5,478	5,647
Complaints reported that have been adjusted by building inspectors	1,708	1,660
Inspections reported by boiler inspector	842	761
Inspections of City boilers and air tanks	96	85
Complaints received and adjusted - boilers and air tanks	542	247
Applications for permits examined and approved by Plans Approval Division	Buildings Signs 1,311 677	1,687 674
Buildings corrected of hazardous parapets and appendages	3	39
Report of Residential Records	9,924	11,930
Miles travelled during the year by vehicles on inspection service	306,948	306,862

PERSONNEL

As of June 30, 1977

ROBERT C. LEVY, SUPERINTENDENT  
McHOY CHOY, DEPUTY SUPERINTENDENT

GENERAL OFFICE - ADMINISTRATIVE:

D. N. Barnard	1	1408 Principal Clerk
Principal Clerk	2	1446 Senior Clerk Steno.
	<u>1</u>	1444 Clerk Stenographer
	4	

PLANS APPROVAL DIVISION:

	0	5210 Senior Civil Engineer
H. G. Fong	1	5214 Building Plans Engr.
Building Plans Engineer	1	5218 Structural Engineer
	5	5208 Civil Engineers
	1	5206 Associate Civil Engr.
	2	6266 Senior Plan Checker
	1	6262 Plan Checker
	<u>1</u>	1424 Clerk Typist
	12	

BUILDING INSPECTION DIVISION:

R. McDonnell	1	6334 Chief Building Insp.
Chief Building Inspector	<u>14</u>	6331 Building Inspectors
	15	

ELECTRICAL INSPECTION:

	0	6250 Chief Elec. Inspector
R. DeMay	1	6252 Line Inspector
Acting Chief Inspector	16	6248 Electrical Inspectors
	1	1446 Sr. Clerk Stenographer
	<u>1</u>	1424 Clerk Typist
	19	

PLUMBING INSPECTION DIVISION:

	1	6244 Chief Plumbing Insp.
K. R. Lewis	9	6242 Plumbing Inspectors
Chief Inspector	<u>1</u>	1424 Clerk Typist
	11	

BOILER INSPECTION SECTION:

F. Reid	<u>1</u>	6236 Boiler Inspector
Boiler Inspector	1	



# PARAPET SAFETY SECTION:

F. Lew	1
Structural Engineer	2
	<u>1</u>
	4

5218 Structural Engineer  
6331 Building Inspectors  
1446 Sr. Clerk Stenographer

# RESIDENTIAL BUILDING RECORDS SECTION:

J. Farr	1
Senior Clerk	1
	<u>1</u>
	3

B-516 Senior Clerk Typist  
1426 Senior Clerk Typist  
1424 Clerk Typist

# PROPERTY CONSERVATION GROUP:

B. A. Cummings	1
Asst. Superintendent, P.C.	<u>1</u>
	2

5178 Assistant Superintendent  
5286 Administrator, P.C.

# ABATEMENT DIVISION:

R. Frankoni	1
Chief Inspector	12
	1
	1
	1
	1
	<u>2</u>
	19

6334 Chief Building Inspector  
6331 Building Inspectors  
6248 Electrical Inspector  
6242 Plumbing Inspector  
1444 Clerk Stenographer  
1426 Senior Clerk Typist  
1424 Clerk Typists

# APARTMENT AND HOTEL INSPECTION DIVISION:

E. Orr	1
Chief Inspector	1
	12
	1
	1
	<u>1</u>
	17

6274 Chief Res. Env. Insp.  
6272 Sr. Res. Env. Insp.  
6270 Res. Environ. Inspectors  
1446 Sr. Clerk Stenographer  
1444 Clerk Stenographer  
1424 Clerk Typist

# FACE/RAP DIVISION:

W. O'Neill	1
Property Rehab. Manager	<u>44</u>
	45

6336 Property Rehab. Manager  
See FACE/RAP Chart

# CENTRAL PERMIT BUREAU

N. S. Machol	1	1844 Sr. Mgmnt Assist.
Sr. Management Assistant	2	1408 Principal Clerk
	3	1426 Sr. Clerk Typist
	4	1424 Clerk Typist
	1	1402 Jr. Clerk
	1	4320 Teller
	<u>1</u>	1752 Sr. Microphoto Tech.
	13	

## TEMPORARY EMPLOYMENTS:

SFRA Work Orders	5½	1424 Clerk Typists
CETA - Building Insp.	4	1422 Junior Clerk Typists
	1	1424 Clerk Typist
CETA - Central Permits	1	1404 Junior Clerk
	2	1422 Junior Clerk Typists
	<u>1</u>	9998 Staff Assistant
	14½	

## RETIREMENTS:

During the past year, the following employees were retired and recognition is given for their faithful service:

Bahr, Frederick	6248 Electrical Inspector	16 years
Boehle, Anton	6334 Chief Building Inspector	35 years
Goldberg, Alfred	5183 Deputy Superintendent	27 years
Maitland, Walter	6252 Chief Electrical Inspector	20 years
Morasutti, Amalia	1444 Clerk Stenographer	4 years
Penna, Guido	6248 Electrical Inspector	22 years
Spencer, James	6331 Building Inspector	17 years
Warda, Joseph	6331 Building Inspector	28 years

# DAHI ACTIVITIES

1975-76

1976-77

No. of Structures Inspected-Inspection  
Orders turned in (Does not constitute  
total number of inspections made)

Apartment Buildings	12,356	8,938
Hotels	300	218
SFRA Relocation Inspections		607
No. Complete Inspections	1,495	645*
No. Structures Rehabilitated	532	480

No. Structures "Picked Up"  
(no Previous Housing Files)

	Bldgs.	Units	Bldgs.	Units
Apartment Buildings	133	519	66	249
Hotels	2	108	4	30

No. New Buildings and No. Units  
Gained

Apartment Buildings	88	1,405	77	1,065
Hotels	2	678	2	53

No. of Structures Reverted to Dwelling 49 36

No. of Structures Demolished

	Bldgs.	Units	Bldgs.	Units
Apartment Buildings	26	201	34	257
Hotels	9	549	7	169

No. Cases Abated  
With Building Permit

532	498
507	485

Total Units in Substandard Bldgs.

Last Total No. Legal Units

No. Dwelling Units Brought

Into Compliance

No. Units Eliminated

No. Units Gained

A*	B*	A*	B*
	6,376		4,401
6,202		4,282	
6,300	6,300	4,346	4,346
28	79	31	76
126	3	86	21

A\* - As per original use.

B\* - As per existing use.

No. Permits of Occupancy

Issued Revoked

Issued Revoked

Apartment Buildings

984

248

2,402

110

Hotels

40

75

9

Apartment/Hotel

5

7

1

No. Administrative Conferences

461

379

No. Condemnation Cases - Recommended

Apartment Buildings

377

198

Hotels

2

8

# DAHI ACTIVITIES

	<u>1975-76</u>	<u>1976-77</u>
No. Building Permit Applications Received and Processed	2,656	2,158
No. Requests for Citation to District Attorney	0	1
No. Requests for Warrants	3	3
No. Complaints Received	755	762
No. Complaints Abated	600	678
No. Notices Sent	6,300	4,036
No. Potential Displacements		
Apartment Buildings	270	97
Hotels	26	32

\*The rate of "complete inspections" for the division is 1,000 per year. A change in the systematic code enforcement program is reflected in the number reported for 1976-77, however, the rate of production did not decline.

## ABATEMENT ACTIVITIES

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Cases on hand	<u>2787</u>	<u>3318</u>	<u>3522</u>	<u>3469</u>	<u>3098*</u>
Cases logged in	1031	619	530	491	260
Cases sent to Director's hearings	549	736	314	218	630
Abatement Appeals Board					
Filed	282	209	170	177	165
Decisions Rendered	333	166	163	128	69
Cases referred to City Attorney	414	185	223	175	200
Complaints closed	403	415	409	415	906
Complaints incomplete referrals	0	11	0	6	33**
Buildings restored	323	334	358	340	800
Buildings demolished	80	70	51	69	73
Cases on hand end of fiscal year	3318	3522	3469	3545	2452

\*The figure was determined by means of a physical audit of the files rather than EDP printout.

\*\*Cases returned to DAHI for lack of electrical or plumbing report.

# RAP ACTIVITIES

	<u>Inner Richmond</u>		<u>Upper Ashbury</u>	
	Bldgs.	DUs.	Bldgs.	DUs.
Total workload	1,195	2,254	1,457	4,134
Buildings inspected	417	736	257	472
Reports mailed	358	604	141	343
Loan applications received	56	98	37	82
Work Write Up started	41	71	12	26
Work Write Up completed	14	15	2	4
Working without loan	145	248	6	15
Working with RAP loan	4	8	-	-
Buildings SCCd	14	27	2	3
Found Standard	5	11	-	-

## FACE/RAP LEGAL ACTIVITIES

	CASES FILED			CASES TERMINATED			REMAINING WORK LOAD			% OF FACE RAP TOTAL
	TOTAL	FACE	RAP	TOTAL	FACE	RAP	TOTAL	FACE	RAP	
June 73	414	114	-	203	43	-	714	161	-	22%
June 74	185	25	-	175	36	-	734	150	-	20%
June 75	207	36	-	184	40	-	705	145	-	21%
June 76	187	22	3	190	31	-	807	167	13	20%
June 77	165	19	3	301	63	5	448	95	15	24%

## AB 475 ACTIVITIES (To 6/30/77)

Work in Progress (I-153 Notices from Superintendent)	2200
Notice of Non Compliance Mailed to Owner	1881
Cases Appeal Filed	981
Cases Restored or Withdrawn	181
Cases Yet to be heard by AAB	4
Decision Rendered:	
Cases Granted	529
Cases Denied	267
No Appeal Filed - Notice of Non Compliance to FTB	649
Notice of Compliance to Owner/FTB	464

THE FOLLOWING TABLES ILLUSTRATE THE SCOPE OF THE  
ACTIVITIES OF THE CENTRAL PERMIT BUREAU

TABLE I  
PERMITS ISSUED AND FEES RECEIVED

	1976-77		1975-76	
	PERMITS	FEES	PERMITS	FEES
Building Permit	12,135	\$ 602,210	10,569	\$ 601,893
Application Filing Fee	9,884	(Above)	19,246	(Above)
Demolition	226	4,028	210	5,728
Boiler Installation	88	1,890	94	1,130
Boiler Inspection	571	9,530	483	9,768
Street Space*	514	143,827	557	204,271
House Number	193	3,472	412	2,883
House Moving	7	140	2	40
House Moving Invest. Fee	6	105	0	--
Excavation (Pub. Util.)	14,964	59,856	16,756	67,026
Excavation & Curb(other)	992	3,968	478	2,269
Partition Relocation	75	225	25	75
Flue	1,743	5,230	1,631	4,661
Posting Notice	543	1,083	327	846
Flower Market	47	4,510	61	5,271
Advertising	0	--	47	526
Survey	1	700	0	--
Engineering Inspection	79	34,456	100	27,770
Elec. Wiring and Fxtr.	11,316	278,652	10,581	273,448
Electrical Sign	694	4,063	655	3,220
Electrical Sales	933	25,600	1,986	23,855
Plant Owner	0	--	23	2,300
Plan Checking	4,478	278,566	3,657	261,307
Garage Door Coupons	300	900	925	2,625
Plbg. Fxtr. & Gas Appl.	9,642	271,942	7,704	248,110
Gas Appliance Dealer	22	550	25	625
Residential Inspec. Rpt.	31	1,085	22	1,400
Residential Record Rpt.	11,892	89,190	9,924	74,393
Industrial Wastes	2,970	63,179	2,920	88,207
Blasting	4	48	6	12
Sidewalk	1,484	10,930	2,364	17,284
Sub-Sidewalk Space*	7	42	6	293
Debris Box	5,275	13,176	5,760	11,600
TOTAL - TABLE I	91,116	1,913,153	97,578	1,943,566
TOTAL - TABLE II	2,382	708,224	2,745	396,452
TOTAL - TABLE III		28,411,783		21,132,920
GRAND TOTAL - PERMITS AND RECEIPTS	93,498	31,033,160	100,323	23,472,938

\* Permits and fees only. See Table II for Refundable Deposits

TABLE II  
TRUST FUND DEPOSITS

	<u>1976-77</u>		<u>1975-76</u>	
	<u>PERMITS</u>	<u>DEPOSITS</u>	<u>PERMITS</u>	<u>DEPOSITS</u>
REFUNDABLE DEPOSITS				
Street Space	*	\$ 28,468	*	\$ 24,996
Sub-Sidewalk	*	0	*	7,900
Deposit on Plans	1,969	112,620	2,106	97,540
Excavations	*	0	*	180
	<u>1,969</u>	<u>\$141,088</u>	<u>2,106</u>	<u>\$130,616</u>
* Street Space, Sub-Sidewalk and Excavations require both a fee and a deposit. Amounts shown are deposits only.				
PARTIALLY REFUNDABLE DEPOSITS				
Side Sewers	202	\$435,595	304	\$157,835
Side Sewers - Excess Costs		<u>38,313</u>		<u>31,773</u>
	<u>202</u>	<u>\$473,908</u>	<u>304</u>	<u>\$189,608</u>
AGENCY DEPOSITS				
Street Improvement Bonds	211	\$ 70,593	335	\$ 67,585
State - Strong Motion Program		<u>22,635</u>		<u>8,643</u>
	<u>211</u>	<u>\$ 93,228</u>	<u>335</u>	<u>\$ 76,228</u>
TOTAL TRUST FUND DEPOSITS	2,382	\$708,224	2,745	\$396,452

TABLE III  
OTHER RECEIPTS

	<u>1976-77</u>	<u>1975-76</u>
General Fund	\$18,116,895	\$11,794,235
Special Gas Tax - Street Improvement Fund	6,839,531	5,622,315
Road Fund	3,317,898	3,560,461
State Highway Trust Fund	78,704	119,888
Various Funds	<u>58,755</u>	<u>36,021</u>
TOTAL OTHER RECEIPTS	\$28,411,783	\$21,132,920



TABLE IV

## STATEMENT OF CONDITION - PRIVATE TRUST FUNDS

As of June 30, 1977

	BALANCE 6-30-77	DEPOSITS 1976-77	TRANSFERS & REFUNDS 1976-77	BALANCE 6-30-77
Excavation	\$ 4,616.30	\$ 0.00	\$ 0.00	\$ 4,616.30
Street Space & Sub-Sidewalk	141,256.00	28,468.00	10,470.00	159,254.94
Plans & Specifications	77,089.00	112,620.00	102,635.00	67,104.00

# PROPERTY CONSERVATION DIVISION

## ORGANIZATION CHART

As of June 30th, 1977

Asst. Supt. Prop. Cons.  
B. Cummings

Division of Apartment  
and Hotel Insp. DAHL (17)  
Chief Resp. Env. Insp  
E. Orr.

Systematic Inspection  
on a priority Bases;  
1000 most hazardous  
Bldg. per year annual  
Insp. For permit of  
occupancy; complaints.  
Sr. Res. Env. Insp. 1  
Res. Env. Insp 11  
Res. Env. Insp (V) 1  
Cik Steno \*\*1  
Cik Typist \*\*1  
TOTAL 18

Administrator Prop.  
Cons. R.F. Dunne

Property Rehab. Mnger  
Wm. O'Neill

Abatement (22)  
Chief Building Insp  
Dick Frankoni  
Litigation of citywide  
code enforcement cases  
originating from  
throughout the bureau  
where compliance was  
not secured voluntarily  
Bldg. Insp. 12  
Elect. Insp 1  
Plumb. Insp 1  
Fire Insp 1  
Sr. Cik Typ 1  
Cik Steno 2  
Cik Typ \*\*2  
TOTAL 21

CENTRAL OFFICE (13)  
Chief Cik 1  
Prncpl. Acct 1  
S&P Analyst 1  
Mgt. Asst. 1  
Jr. Mgt. Asst 3  
Sr. Cik Typ 3  
Cik Typ 3  
Jr. Acct. Cik 1  
Jr. Cik 1  
TOTAL 13

## Rehabilitation Assistance Program

### FACE

ALAMO SQUARE  
Bldg. Insp 1  
Sr. Cik Typ \*\*1

BERNAL HEIGHT  
Bldg Insp 1\*

DUBOCE TRIANGLE  
Bldg Insp. 1\*  
Cik Typ \*\*1\*

INNER RICHMOND  
FIELD OFFICE (20)  
Sr. Bldg Ins 2  
Bldg Insp 10  
Plng Insp 2  
Elect Insp 2  
Com. Lsn of 1  
Sr Cik Typ 1  
Cik Typ 2  
Total 20

UPPER ASHBURY  
FIELD OFFICE (17)  
Sr. Bldg Ins 2  
Bldg Insp 7  
Plng Insp 2  
Elect Insp 2  
Com Lsn of 1  
Sr Cik Typ 1  
Cik Typ 2  
Total 17

S	U	P	P	O	R	T	S	E	R	V	I	C	E	S
RealEst	CityPln	Plns	2	Atty	2	CityAty	Bur Acct	CRS	Bur of					
Lnoffg	Cik Typ	ActCk	1	Cik Typ	2	Cik Typ	Act	On case	Eng.					
CikTy	Total	CikTy	1	Total	3	Cik Typ	Total	Bases	Contr-					
Total	6	Total	6	Total	6	Total	6	act	Asgt.					

\* Temporary \*\*CETA V-Vacant  
--Serve All Three FACE Areas



Southern Pacific Towers  
1 Market Plaza.

Lower left-Bechtel Building  
50 Beale.

Below-Chinese Hospital Clinic  
Jackson and Stockton.





Above-Pacific Telephone Building  
666 Folsom.

Below-La Salle Apartments  
Hunters Point Redevelopment Area.



## BUREAU OPERATIONS

### PROPERTY CONSERVATION DIVISION

#### A. Division of Apartment and Hotel Inspection (DAHI)

This Division is responsible for the Systematic Code Enforcement Program (SCEP). On the basis of a rating made ten years ago establishing the degrees of hazard in the city's hotels and apartment buildings, complete inspections of rated structures have been carried out on a priority basis, whereby each succeeding year the next most hazardous buildings are examined. During the past fiscal year, 645 structures were inspected, bringing the total to nearly 10,000 out of the 18,000 buildings (representing 180,000 dwelling units, or 60% of the housing stock) covered by the program.

During the past year, a study of maps maintained by the Fire Department revealed that the Mission District is the only area in the City where the number of deaths due to fire has risen over the past ten years. This disclosure led to a 50% increase in the penalty point ratings previously established for the Mission, and the program in that area has been accelerated accordingly.

In addition to the complete inspections, systematic routine checks are conducted to ensure proper maintenance of buildings covered by the program. As a new step in the procedure this year, notification is made by mail to the owner of any items found to be substandard in public areas of a structure. It has been found that follow-up for compliance is now required for 50% of the 500 buildings inspected each month.

In the early stages of the complete inspection program, over 60% of the buildings had to be referred to the Abatement Section for possible litigation. Now there is a reverse trend, and 60% are complying voluntarily without referral to Abatement. The primary reason for the change is felt to be the basically better condition of structures being checked in the course of the program. Passage of California AB-475 in 1974 has also proven helpful as an incentive to compliance, since it provides that the owner of rental property loses his state income tax exemption on the property if he fails to correct code violations within six months after notification. A total of 1881 owners have been notified; of these 464 have complied, 649 have been referred to the State Franchise Board, and 768 are in litigation before the Abatement Appeals Board.

Due to the acceleration in voluntary compliance, 906 buildings were withdrawn from the Abatement Section workload last year--100% more than the previous year. Another factor

tending to reduce this volume of work is the Kopp Amendment to the S.F. Building Code which tightens the time limits for moving cases to the Director's public hearing, through the Abatement Appeals Board, and on to the City Attorney's office for prosecution in the courts.

The need for computer capability for tracking cases through the succession of time limits and monitoring cases through the SCEP process was recognized by the Board of Supervisors, and funds were appropriated over the past two years for system development. On line computer terminals were installed in July, 1977 and "flagging" reports are due by December, 1977.

## B. Abatement Section

Abatement Section of the Bureau of Building Inspection is responsible for preparing cases for possible litigation when property owners refuse or are unable to bring their buildings into code compliance. It also provides physical inspection reports of residential building record to owners selling their property.

Chief Building Inspector Robert Dunne was promoted "Administrator" Property Conservation in April of this year. Richard Frankoni took over the position of Chief Building Inspector of the Abatement section.

Extensive clerical activity of the Abatement section consists of AB-475 Notice of Violation to be mailed to owner and compliance Notices to Franchise Tax Board (FTB). One clerk steno handles the Abatement Appeal Board hearings, both regular and AB475. In addition to dealing with the public, typing of agenda, notifying owners, scheduling up of cases and compilation of statistical report are the related activities. Other activities include logging in of cases, setting up the cases for Director's Hearing and follow up, referring the case to City Attorney and follow up, preparing control cards, up dating of tickler file, recording of condemnation order with the Recorders office, stripping of files and inquiries at the counter.

With the opening of Inner Richmond RAP area two Building Inspectors and one Sr. Clerk Typist were transferred on November 15, 1976. Two Building Inspectors terminated their services with this section. Consequently some time was lost in hiring new building inspectors.

A very aggressive program of court hearings has been pursued by the City Attorney for those cases condemned by the Director of Public Works in which the owners have failed to abate the



violations. The rate of compliance actively resulting from the actions of the City Attorney's office in the past year is truly astounding and full credit must be given to that office. The City Attorney on a work order basis, has provided legal services to FACE/RAP equivalent to one full time Deputy City Attorney and a legal stenographer. Also, but not on a work order basis, legal services are provided for other Abatement cases (in addition to FACE/RAP). Cases outside of FACE/RAP areas in which the owner does not comply with the decision of the Director and/or AAB are referred to the City Attorney's office for legal action.

The Abatement Appeal Board (AAB) was set up under Section 203.1 of Building Code. The purpose of the Abatement Appeal Board is to hear the appeals of property owners originating from the Director's decision. The Board consists of five (5) members appointed by the Chief Administrative Officer for a term of four (4) years. The secretary is the Assistant Superintendent Property Conservation. The Board holds a meeting every 4th Wednesday of each month at Room 282, City Hall. During the fiscal year 1976-77, 165 appeals were filed and 69 decisions were rendered by the Board on the regular Building and Housing Code appeals.

State Assembly bill 475, authored by Assemblyman Willie Brown, has been in effect since January 1975. Under this law an owner of rental property loses his California State income tax exemption on his rental property if he fails to correct his code violation within six (6) months of being notified by Superintendent. The AAB also hears appeals to these notifications. Approximately 7000 property owners have been notified to date. Of these, 1881 have not complied and, unless reversed by the AAB, the Superintendent will notify the Franchise Tax Board (FTB), which will then prohibit the tax deductions. The AAB has heard 796 appeals while 649 Notice of Non-Compliance were sent to FTB. This has been a valuable tool in the Bureau's housing code enforcement effort.

#### C. Federally Assisted Code Enforcement (FACE)

This program, started in September, 1966, is now in its final phase, with termination scheduled for September, 1977. In the seven designated FACE areas, a total of 410 relocation requests were received. Sec. 115 Grants, for low income households were arranged for 360 cases amounting to \$878,265. Sec. 312 loans were approved for 1,111 cases amounting to \$16,649,900. As of June 30, 1977, 98.5% of the buildings in areas 1-7 were in satisfactory code compliance (SCC); there are 282 cases in litigation (awaiting court action or lifetime moratorium), which cases are considered out of the work load until resolved.



#### D. Rehabilitation Assistance Program (RAP)

This program, operationally a continuation of the soon to expire FACE Program (but under different modes of financing), is part of the City's comprehensive plan to ensure the maintenance of neighborhood characteristics as well as the quality of housing. The program concentrates on all the structures within a designated area. Property owners are assisted in bringing their buildings up to code standards through low interest rate loans. This most exciting and innovative program, the nation's first, is the fruition of five years of work involving City officials, Bank of America, State and Federal agencies.

The IRS, in a March 1976 ruling, gave RAP bonds tax exempt status. In November, 1976 the Bank of America purchased \$2.5 million in RAP 10-year bonds at 5% interest. The city makes 20-year loans at 6% interest, including a servicing fee to property owners in designated RAP areas. The interest rate is renegotiated at the end of 10 years. All property owners in the area are subject to mandatory inspection for compliance with the S.F. Housing Code. RAP loans are available to finance the required work, as well as some additional general property improvements if desired by the owner. Community Development Block Grants funds provide for the cost of administration of the program, hardship loans (i.e., interest free), deferred payment loans up to \$3500, relocation payments, and public improvements.

Inspection began in December, 1976 in the Inner Richmond and in April, 1977 in the Upper Ashbury. Public hearings have been held by the Director of Planning in the North of Market (Tenderloin), Hayes Valley and Bayview North areas to determine public reaction to proposals for RAP.

#### E. Repair and Demolition Fund

This fund was established to pay for expenses to barricade, securing, repair, alter, demolish and clear buildings declared unsafe by the Department of Public Works. The cost of the work is charged against the property and funds are put on the tax roll.

Eight buildings were demolished or barricaded this year. None could be repaired by means of these funds because the costs required to bring them into compliance would have exceeded 50% of their assessed valuation, the limit set by the Code.

As of June 30, 1977 \$27,973.49 remains of the \$100,997.66 originally appropriated to this fund, with \$65,934.17 having been expended or encumbered this year.

## PLANS APPROVAL DIVISION

The structural plan check volume was \$235 million as compared with \$288 million for fiscal year 75-76, which was an abnormally high volume year due to the approval of a number of site permits in the major high-rise category. The \$235 million still represents a significant volume increase over the two years preceding the last fiscal period, which were \$169 million and \$190 million respectively.

The personnel situation improved somewhat over fiscal year 1975-76. Still, the shortage of two engineers for the first ten months, and one engineer for the last two months has had an adverse effect on production. The increased production norm by methods instituted last fiscal year has helped to hold the backlog down within reasonable bounds.

During this period, Mr. Goldberg's and Mr. Kastius' premature retirements, and the return of Mr. Levy as Superintendent, created a vacancy in the Deputy Superintendent position. The duties of that position were partially assigned to Mr. M. Choy, Sr. Civil Engineer in charge of the Plans Approval Division until June, at which time he received a temporary appointment as Deputy Superintendent. Because of necessary augmentation of duties, the review and processing of material approved requests had to be curtailed drastically.

It is expected that early next fiscal year the filling of the senior engineer position (vice M. Choy) and all other affected positions will have been filled. Work can then proceed on a regular basis on materials approval requests. In addition, the San Francisco Building Code is scheduled for its triennial update and amendment in 1978. This will require considerable time and effort by Plan Approval Division, which is responsible for the structural, fire safety and related provisions of the Code.

The passage of Proposition S in the 1976 election gave the City a mandate to construct an underground convention center at the Yerba Buena Center Project site. Because of the size and complexity of the project, and Code problems inherent in underground assembly for occupancy in excess of 1000 people, the matter had been referred to the Board of Examiners for advice and formulation of design guidelines. Significant plan checking time will be required for this project. However, it is anticipated that the plan checking staff will be at full complement by that time, with a possibility of additional structural checking help to be provided by special funding.

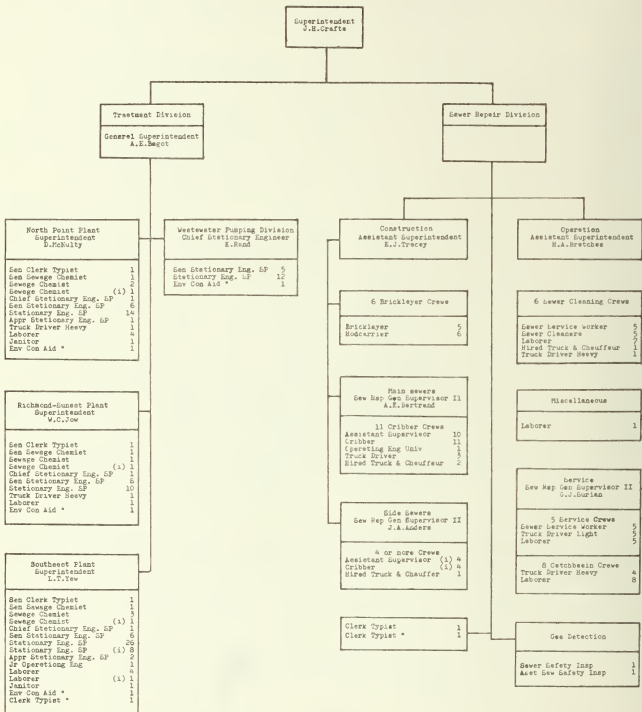
## PARAPET SAFETY SECTION

The Parapet Safety Program made slower than expected progress during its second year of operation. The rapid initial inspections during the first year, coupled with the significant changes made to the Program, gave rise to more paperwork and time demands from the public than could be handled by the limited office staff. The problem was aggravated by the need to utilize some staff time on other pressing Bureau activities. In order not to compound the problem, no new survey inspections were made during the fiscal year. However, progress was made in bringing into compliance buildings already cited. Corrective work was completed on 39 buildings, and permits were processed, or work under way, on another 45 buildings. As the two year deadline for compliance approaches for the earliest inspected buildings, preparations are being made to obtain compliance through legal procedures. It is anticipated that a few favorable court decisions will help significantly to increase the rate of compliance by owners.

At the start of the Program, various groups that are interested in the City's environment and appearance expressed concern over the impact the Program may have on these characteristics of the City. They were instrumental in limiting the Program essentially to parapets, cornices, freestanding statuary, chimneys, and roof tanks. Even so, these groups were still worried that owners may choose to remove cited features rather than to strengthen and retain them. The Bureau then agreed to refer to the Department of City Planning for review any permit applications showing removal of cited features. City Planning, while lacking authority to require retention, could nevertheless try to persuade owners to strengthen rather than remove in those cases where it was felt removal would be detrimental to the streetscape. Fortunately, this route has been seldom traveled to date. On about 2 out of 3 buildings, parapets are the only features being cited. In almost all cases, the most economical correction has proved to be bracing the parapets and providing roof-to-wall anchors.

Costs for bracing a typical brick parapet run to about \$40 per lineal foot, and total costs, including consultant fees, averages \$16,000 per building. These figures could be misleading however, for actual costs have varied widely, from a low of \$600 to a high of \$70,000. Additionally, the work performed to date has not included buildings with terra cotta or masonry cornices and statuary. Costs for corrections on such buildings are likely to be much higher. While relatively small in number, they are likely to be buildings of greater historical or architectural significance. The Parapet Task Force, in cooperation with the AIA, has obtained a grant from the National Trust for Historic Preservation to hire a consultant to research possible methods to bring such features into compliance at a reasonable cost.

ORGANIZATION CHART  
BUREAU OF WATER POLLUTION CONTROL  
DEPARTMENT OF PUBLIC WORKS  
JUNE 30, 1977



(1) Interdepartmental  
\* CETA Employees

## BUREAU OF WATER POLLUTION CONTROL

J. H. Crafts, Superintendent

The Bureau of Water Pollution Control maintains 900 miles of sewers and operates 16 pumping stations, one storm water overflow treatment plant, and three treatment plants. To perform these tasks the Bureau is divided into three divisions: Sewer Repair, Wastewater Pumping and Treatment.

During the year the Bureau had 256 budgeted employees, including 4 hired truck drivers with their vehicles and 5 environmental conservation aids.

The Bureau spent \$8,619,860 in budgeted funds as distributed in Chart I. The Treatment Division continued to provide laboratory support services for the industrial waste program. In addition, the Sewer Repair Division spent \$248,909 on side sewers paid for by property owners and \$8,984 on other work orders from other departments.

Total rainfall for the year was 10.2 in. compared with average annual rainfall of 20.57 in. This is the third consecutive season with rainfall significantly less than normal. Treatment plant flow records show the commencement of voluntary water conservation in February 1977. The effect of the 25% mandatory water rationing by the Water Department appeared to have stabilized at a 27% reduction in wastewater in June 1977. Since wastewater flow does include some infiltration the actual reduction in water usage is probably greater than 27%. Treatment Plant data also show that an increase in the concentration of wastewater constituents has occurred and that the quantity of all constituents except flow has remained essentially constant. The only operating problem experienced has been the adjustment of chlorine feed rates at the North Point Plant. The only apparent change in sewer maintenance has been an increase in odor complaints. With the City's combined sewer system, the concern is that the long dry period together with reduction in personnel will result in a substantial number of plugged sewers and flooded street catch-basins during the next normal storm season.

### SEWER REPAIR DIVISION

The Division cleans, repairs and makes minor additions to main sewers, side-sewers, and related structures; tests sewers for oxygen deficiency and explosive and toxic gasses; and controls mosquitoes in catchbasins.

The Division has 99 budgeted employees on main sewer work, eight non-budgeted employees (12 are authorized) for side sewer installations and repairs paid for by property owners, and 4 hired truck drivers to assist in both activities.

Work units or groups are shown in the organization chart. While many of the groups frequently assist each other, the material trucks, digging unit and compressor unit are almost entirely subsidiary as their principal function is to assist other units.

Rainfall is below normal this year. However, three storms occurred with rainfall intensities at times exceeding the 5-year design rate resulting in widespread complaints of flooding and popped manhole covers. The Division received 106 telephone calls in the first storm of October 1, 1976, 329 telephone calls of December 30, 1976, and 150 telephone calls of January 2 and 3, 1977. The nature and frequency of the complaints are tabulated below:

	<u>Oct. 1, 1976</u>	<u>Dec. 30, 1976</u>	<u>Jan. 2 &amp; 3 1977</u>
Side sewer flooded	17	45	23
Main sewer clogged	3	4	2
Catchbasin flooded	81	269	110
Catchbasin grate off		1	
Manhole cover off	2	2	15
Hole in street	3		
Miscellaneous		8	
	<hr/>	<hr/>	<hr/>
TOTAL	106	329	150

There has not been any heavy rain since January 1977. Due to the current drought and water rationing, an unusual number of sewer odor complaints have been received. These odors are usually caused from reduced flow velocity in the main sewer allowing solid materials to settle.

The lack of water in the catchbasins then allows odors which are normally blocked by the catchbasin trap to emit in the atmosphere.

Major sewer failures occurred at Bay and Stockton on November 10, 1976, and July 7, 1976, when the 10" force main broke, 946 Kansas on January 24, 1976, when it was necessary to replace 10' of 8" VCP in an easement, three breaks on 29th Street between Noe and Sanchez on February 7, 1977, when it was necessary to replace 33' of 15 and 18" VCP.

The Division received 4,683 telephone complaints during the year. The activities of the work units are summarized in Chart II. The work done by the service trucks is shown below:

<u>SIDE SEWERS</u>	<u>NO. CALLS</u>	<u>PERCENT</u>
Relieved clogged side sewers	1,944	16.2
Unable to relieve clogged side sewer	469	3.9
Found side sewer broken	117	1.1
Found trouble inside property	71	0.5
Examine for crew on job	23	0.2
Sub-Total	2,624	21.9
<u>MAIN SEWERS</u>		
Investigate condition to find cause of problem	1,029	8.5
Relieved clogged main sewer	48	0.4
Unable to relieve clogged main sewer	56	0.5
Found main sewer broken	126	1.1
Examine for crew on job	33	0.2
Sub-Total	1,292	10.7
<u>CATCHBASINS AND MANHOLES</u>		
Remove obstruction	385	3.2
Replace cover	173	1.4
Silence noisy cover	98	0.8
Catchbasins & manholes found broken	36	0.3
Unable to relieve catchbasins	127	1.1
Sub-Total	819	6.8
<u>DEPRESSIONS</u>		
Investigate to find cause	875	7.3
Cause by sewers	141	1.4
Not caused by sewers	304	2.5
Sub-Total	1,320	11.2
<u>MISCELLANEOUS</u>		
Service lights & barricades	5,221	43.7
Investigate seepage leaks	58	0.5
Clean up pumping stations	163	1.4
Deliver material	226	2.2
Not classified	201	1.2
Remove deposit on sidewalk	1	0.0
Mosquitoes	48	0.4
Sub-Total	5,918	49.4
TOTAL	11,973	100.0



## WASTEWATER PUMPING DIVISION

The Wastewater Pumping Division operates and services one storm water overflow treatment plant and 16 wastewater pumping stations and has 18 budgeted employees. In addition, a half time electrician is provided by the Bureau of Building Repair on work order. The Division expenditures and costs are shown in Chart III.

The Baker Street Dissolved Air Flotation Facility, which is designed to treat 24 million gallons per day of sanitary waste and storm water overflow from the surrounding drainage district, was operated during periods of rain as a primary type plant with post chlorination.

Fifteen pump stations are designed to handle normal dry weather sanitary flow plus the runoff from a rainfall of 0.02 inch per hour. The Tennessee Street Station, however, has no bypass and must handle not only the sanitary flow but also all storm runoff from its tributary area. The Lake Merced Station is equipped with variable speed pumps whose speed is matched to the rate of flow by a combination of electrical controls and pneumatic sump level sensors. The other stations are equipped with fixed speed pumps operated intermittently and in varying combinations to match the incoming flow. Pump operation is controlled by switches which function at fixed sump levels. At 10 stations these switches are activated by floats and two stations by pneumatic level sensors. Automatic influent throttling gates at the Drumm Street, Fourth Street North, Lake Merced, Marina, Sea Cliff No. 2 and Yosemite Stations permit them to operate at full capacity during storms.

The stations are serviced by four two-men roving crews on a 24-hour per day, seven day week schedule. In addition, the Sea Cliff No. 2, the Marina, and the Drumm Street Stations each are tended by a full-time man, five days a week. The first two stations require this attention because of their age and the critical nature of the areas they serve. The Drumm Street Station has no emergency overflow and it is necessary to start and service the emergency diesel generator set every four days in order to check its reliability. A power breakdown here could cause flooding in major downtown buildings served by this facility.

Major maintenance work at the stations includes the following:

Drumm Street	Repaired hydraulic cylinder on 24" influent gate valve; overhauled #1 sewage pump, and renewed upper universal joint and bearing on pump drive shaft; installed two new vigatrol overflow alarm sensors; installed new 12" suction valve to #2 sewage pump.
Fourth Street, North	Grouted 50' of 12" vitrified clay pipe to stop channel sea water infiltration; replaced land fill and renewed 180 sq ft of sunken sidewalk; repaired volute on #2 sewage pump; renewed main throttling switch on hydraulic influent gate. Installed 2 new vigatrol overflow alarm sensors; overhauled sump pump.
Hunters Point	Installed new Clayton air gap valve and float control on City water entering the station.

Lake Merced	Overhauled #1 and #3 sewage pumps; replaced 6" check valve to #4 sewage pump; overhauled hydraulic ram cylinder on 24" influent valve.
Marina	Rebuilt #2, #4 and #5 sewage pumps; rewound two speed electric motor to #1 sewage pump; installed new internal parts to a 12" check valve on #2 sewage pump discharge; replaced parts in #4 sewage pump electric motor starter.
Mariposa Street	Installed new 6" check valve on #1 sewage pump discharge; installed new Clayton air gap valve and float control on City water entering station.
Sea Cliff #2	Replace four 37-year old worn sewage pumps with 4 new pumps, plus electric motor, starters and some electric wiring renewed.
Twentieth Street	Rebuilt #1 sewage pump; installed new 6" suction valve to same.
Vicente Street	Installed new 20' by 6" stilling well in sump to accomodate an electronic overflow sensing unit complete with recorder and water piping to stilling well.
Yosemite	Installed new 10" suction valve on #1 sewage pump, also new 12" discharge valve on #3 sewage pump; overhauled salt water pump.

#### TREATMENT DIVISION General

The Treatment Division operates and maintains the North Point, Richmond-Sunset, and Southeast Water Pollution Control Plants, monitors water quality in the bay and ocean and advises other City Departments, commissions and agencies about sewage treatment facilities under their jurisdiction.

The Division has 105 budgeted and 17 interdepartmental employees working at three plants. They are supplemented by two electricians and two painters budgeted by the Bureau of Building Repair, two gardeners provided by work order from the Bureau of Street Cleaning and Tree Planting, four machinists provided by work order from the Purchasing Department, and one half-time electrician provided by work order from the Bureau of Building Repair.

This year three stationary engineers were temporarily transferred from the Wastewater Pumping Division to the Treatment Division so as to assist in relieving the backlog of maintenance work created by the City workers strike of 1976.

Three journeymen stationary engineer positions were reclassified to the apprentice rank so as to accomodate the creation of a new departmental stationary engineer training program.

A new program was initiated in conjunction with the Civil Service Commisison using Federal comprehensive employee training agency funds to train three chemists and biologists in wastewater chemistry, treatment plant operation and administration.

Treatment activity is shown in Chart IV. Cost of operation was \$5.69 per capita for the year based on a population of 950,000. This number is an estimate derived from the City Planning Department's projection of peak day and night population and agrees with similar figures developed by the Bureau of Engineering.

#### SEWAGE TREATMENT METHODS

At each plant sewage is treated to remove oil, grease, floating material, grit, screenings and settleable solids. Grit and screenings from all plants are hauled by truck to the garbage fill south of the county line. At the Richmond-Sunset Plant sludge is digested in two stage digestion, elutriated and dewatered by vacuum filter. Filter coal is hauled to City parks for use as soil conditioner. Raw sludge from the North Point Plant is pumped to the Southeast Plant, where it thickened and combined with the raw sludge from the Southeast Plant for treatment by two stage digestion and vacuum filtration. The filter cake is hauled under contract to the garbage fill south of the county line for burial.

Both the North Point and Southeast Plants were operated as advanced primary type plants using ferric chloride and anionic polymer to treat the waste waters.

The following major maintenance was done:

##### NORTH POINT PLANT

Grit System: Overhauled the pneumatic operating system for the North Sand Hopper. Installed rebuilt drive units for grit channels #1 and #2.

Lift Pumping: Rebuilt five check gates for main lift pumps. Overhauled #1 and #2 D.C field motor generators for main lift pumps.

Salt Water System: Overhauled four salt water pumps and renewed signal circuits.

Sedimentation: Renewed collector chain in all six sedimentation tanks.

Sludge Pumping: Rebuilt #1 crosstown sludge pumps.

##### RICHMOND-SUNSET PLANT

Chlorination: Overhauled three evaporators and modified chlorine piping system.

Digestion: Rebuilt the cover for the 80 foot digester modified the digester gas system. Rebuilt #1 and #2 plunger pumps in the digester control room.

Elutriation: Replaced chains, sprockets and flights in east elutriation tank. Replaced sprockets in west elutriation tank.

Lift Pumps: Replaced drive shafts on all lift pumps. Overhauled #2 lift pump magnetic drive.

Screening: Modified screening wiper system, flap gates and replaced chain on #1 and #2 bar racks.

Sludge Pumping: Rebuilt #2 sludge pump.

Vacuum Filtration: Renewed blankets on #1 and #2 vacuum filters. Overhauled rotary valves on #1 filter. Repaired ferric chloride storage tank and filter feed tanks.

Ventilation: Replaced ventilation ducts in sludge control building.

#### SOUTHEAST PLANT

Boilers: Overhauled feed water pumps and regulators; modified pilots and draft louvers to #1 and #2 boilers.

Chlorination: Rebuild #2, #3 and #4 chlorinators and evaporators.

Digestion: Cleaner digester #7; rewound digester gas booster motor.

Grit System: Modified diversion plate within grit and screenings hopper; replaced #3 sand pumps.

Sedimentation: Renewed wearing shoes, hangers, flights and chain as needed in sedimentation tanks #3 and #4.

Sludge Thickening: Renewed all chain, hangers and wearing shoes in west sludge receiving and thickening tank.

Vacuum Filtration: Rebuilt #1 vacuum filter; modified sludge piping to filter system.

#### NEW PROCESS SYSTEMS OR EQUIPMENT

New installations include the following items:

##### NORTH POINT PLANT:

Installed an additional effluent chlorine residual analyser.

##### RICHMOND-SUNSET PLANT:

Installed a new effluent dechlorination facility including two sulfonators, two evaporators, two ejector pumps, one diffuser and a forty ton sulfur dioxide storage tank and associated control equipment.

##### SOUTHEAST PLANT:

Installed a new effluent dechlorination system including three sulfonators, three evaporators, three ejector pumps, air compressor, effluent sampler, chlorine residual analyser and associated control equipment.

Special laboratory projects completed or in progress were as follows:

##### COMPLETED:

Analysis of sewage and industrial wastes for concentration of various chemicals of interest to the City Industrial Waste Program.

Optimized vacuum filter operation at the Southeast Plant.

Re-evaluated the North Point chlorination system to determine the amount of chlorine and points of application to produce desired bacteriological kills.

Polymer evaluation studies for sewage and vacuum filter use.

Salt water intrusion investigation for Regional Water Quality Control Board.

## CONTINUING:

Optimization of chemical dosages for wastewater treatment.

Pesticide and nutrient analysis of plant effluents.

Sanitary surveys of Bay and shoreline waters.

Laboratory quality assurance program following State Health Department and EPA guidelines.

Training program for CETA Students on wastewater chemistry, plant operation and administration.

## BUREAU OF WATER POLLUTION CONTROL

## Budget Expenditures

1976-77

Chart I

	WASTEWATER TREATMENT	WASTEWATER PUMPING	SEWER REPAIR
PERSONAL SERVICES			
Permanent Salaries	\$ 2,209,416	\$ 405,040	\$ 1,698,922
Overtime & Holidays	55,028	9,922	39,321
Fringe Benefits	510,883	90,475	464,558
Interdepartmental	<u>434,004</u>		
Sub-Total	\$ 3,209,331	\$ 505,437	\$ 2,202,801
CONTRACTUAL SERVICES			
Power and Gas**	193,762	33,722	
Plant Equipment	325,612	42,080	
Field Equipment	7,071	1,500	18,146
Sludge Disposal	213,788		
Quality Monitoring	58,078		
Landscape Maintenance	46,313		
Miscellaneous Services	3,824	2,808	2,200
Hired Trucks			<u>75,600</u>
Sub-Total	\$ 848,448	\$ 80,110	\$ 95,946
MATERIALS & SUPPLIES			
Replacement Parts	223,334	8,434	
Field	1,089		79,983
Plant	39,360	2,659	
Fuel and Lubricants	8,103	1,932	26,675
Treatment Chemicals	<u>1,063,578</u>	<u>2,157</u>	
Sub-Total	\$ 1,335,464	\$ 15,182	\$ 106,658
EQUIPMENT			
	16,131	18,318	186,034
T O T A L	<u>\$ 5,409,374</u>	<u>\$ 619,047</u>	<u>\$2,591,439</u>

\*\* In Public Utilities Commission Budget

SEWER REPAIR DIVISION  
Work and Cost Distribution  
1976-77

Chart II

WORK UNIT	WORK DONE	% OF TIME	TOTAL COST	(a)	UNIT COST (1)
1 Sewer cleaning	488,950 Lineal ft cleaned Other work	100	\$ 243,448 -0-	\$ 243,448	\$ .50
2 Eductor operations	7,288 Catchbasins cleaned Other work	43 57	88,061 117,923	205,984	12
3 Services	4,683 Complaints serviced Other work	36 64	88,525 161,026	249,551	19
4 Main pipe sewers	2,643 Lineal ft repaired at 354 Locations	100		387,003	1,093 (dig up)
5 Brickwork	4,478 Lineal ft brick sewer repaired 2 Catchbasins constructed 5 Manholes constructed 724 Catchbasins repaired 171 Manholes repaired	53 2 4 32 7	77,733 2,100 6,230 45,870 10,307	142,240	17 1,050 1,246 63 60
6 Gas detection	1,346 Manholes tested Other work	10 90	3,020 26,805	29,825	2
7 Miscellaneous				112,247	
Total budgeted work				\$ 1,370,298	
8 Work orders (b)				8,984	
9 Side sewers (c)	95 Installations 110 Repairs 10 Connections		123,084 124,130 1,695		1,296 1,128 170
Grand Total				\$ 1,628,191	

- (a) Costs do not include supervision.  
(b) Repairs for other bureau or department  
(c) Paid for by property owners.

WASTEWATER PUMPING STATIONS  
Expenditures and Cost Data  
1976-77

Chart III

Location	Drainage Area In Acres	Million Gallons Pumped	Salaries	Maint.	Power	Materials & Supplies	Equip.	Total	Cost Per Mil Gal Pumped
General					22*			22	
Drums Street	332	901	\$ 59,897	\$5,479	\$4,809	\$ 1,558		\$71,743	79.63
Fourth St. North	138	618	41,083	3,757	6,273	1,069	18,318	70,500	114.08
Fourth St. South	25	54	3,590	328	257	93		4,268	79.04
Fulton Street	82	54	3,590	328	568	93		4,579	84.80
Hunters Point	90	82	5,451	499	496	142		6,588	80.34
Hyde Street **	14				63			63	
Lake Merced	930	563	37,427	3,424	3,778	973		45,602	81.00
Marina	1,125	3,036	201,827	18,459	6,300	5,249		231,835	76.36
Mariposa Street	117	292	19,412	1,775	1,459	505		23,151	75.28
Palace of Fine Arts	2	15	997	91	44	26		1,158	77.20
Pine Lake	3	3	199	18	184	5		406	135.83
Sea Cliff #1	4	4	267	24	65	7		363	90.75
Sea Cliff #2	84	29	1,928	176	2,105	50		4,259	146.86
Tennessee Street	2	15	997	91	91	26		1,205	80.33
Twentieth Street	27	55	3,656	334	449	95		4,534	82.44
Vicente Street	52	75	4,986	456	567	130		6,139	81.85
Yosemite Avenue	1,277	1,636	108,758	9,947	4,681	2,829		126,215	77.15
T O T A L	4,290	7,432	\$494,065	\$45,186	\$32,211	\$12,850	\$18,318	\$602,630	81.09
Baker Street Storm Overflow Facility	187		\$ 11,372	\$ 1,202	\$ 1,511	\$ 2,332		\$ 16,417	
Total Expenditures			\$505,437	\$46,388	\$33,722	\$15,182	\$18,318	\$619,047	

\* Maintenance Shop (\$14) and 24th Avenue and Lake Street Gate (\$6) power bills included in general costs

\*\* Station Discontinued 1975-1976

Chart IV

TREATMENT PLANT OPERATION  
1976-77

	NORTH POINT	RICHMOND SUNSET	SOUTHEAST
<b>1 Wastewater Treatment</b>			
Flow, million gallons			
Total (a)	19,817.0	7,284.0	6,327.8
Avg day (a)	54.3	20.0	17.3
Avg day, dry weather (b)	52.7	19.0	16.8
Max day, wet weather	115.4	33.9	32.4
Max day, dry weather	64.0	19.8	21.8
Max rate, wet weather	157.4	63.7	40.0
Max rate, dry weather	116.0	34.9	28.0
Screenings, cu ft			
Total	44,002	13,930	27,388 (c)
Max day	420	143	567
Per million gallons	2.2	1.9	4.3
Grit, cu ft	33,491	49,969	
Max day	473	486	
Per million gallons	1.7	6.9	
Grit and Screening Hauling, trips	526	309	276
Chlorination, lb			
Pre (d)	461,160		168,720
Post	3,550,210	746,610	2,571,990
Total	4,011,370	746,610	2,740,710
Mg per liter	24.2	12.3	51.9
Dechlorination (e)			
Sulfur Dioxide lb	1,430,160		49,170
Treatment Chemicals			
Ferric Chloride, lb	2,397,340		1,357,305
Anionic Polymer, lb	40,065		7,187
Solids Removed, M lb (dry)	33,556	8,414	19,745
<b>2. Sludge Processing</b>			
Sludge Solids, M lb (dry)			
To digesters		8,414	40,614
Filter Cake		1,663	16,108 (g)
Digester, Gas Produced, M cu ft			
Total		67,746	267,501
Avg day		186	733
Vacuum Filtration Chemicals			
Ferric Chloride, lb		121,012	
Ferric Chloride, % Filter Cake		6.4	
Solid Polymer, lb			70,964
Solid Polymer, % Filter Cake			0.44
Filter cake hauling to parks, trips		279	
<b>3. Power and Gas Purchased</b>			
Power, total kWh	6,242,400	2,368,000	6,115,856
Power, avg, kWh/mo	520,200	197,333	509,655
Natural gas, total therms	76,602	23,588	35,596
Natural gas, avg therms/mo	6,384	1,966	2,966

- (a) For 365.0 days North Point; 3650 days Richmond-Sunset; 3650 days Southeast.  
 (b) Excluding days with .01 inch or more rain and dry days following days with .05 in. or more rain.  
 (c) Combined screenings and grit; discharged into a common bin.  
 (d) Prechlorination for odor control as needed.  
 (e) Dechlorinated 365.3 M gal, Southeast, 19335.3 M gal, North Point effluent.  
 (f) Includes North Point raw sludge.  
 (g) On wet basis 43,454 tons hauled to sanitary fill.



ORGANIZATION CHART  
BUREAU OF STREET REPAIR  
JUNE 30, 1977

SUPERINTENDENT

G. D. Spears

Asst. Superintendent

W. Sheehy

Clerk Typist  
N. Terrell  
P. Dunson (CETA)

Asphalt Division  
Maintenance and Repair  
General Foreman J. Hart

General Laborers	8
General Laborer Foremen	1
Truck Drivers	13
Asphalt Workers	12
Asphalt Finishers	9
Asphalt Finisher Foremen	4
Operating Engineer Univ.	2

Resurfacing Division  
Maintenance and Repair  
Gen. Foreman A. Toussaint

General Laborer	12
General Laborer Foremen	2
Truck Drivers	10
Asphalt Workers	6
Asphalt Finishers	5
Asphalt Finisher Foremen	2
Operating Engineer Univ.	4

Concrete Division  
Maintenance and Repair  
General Foreman F. Curran

Cement Masons	9
General Laborers	12
General Laborer Foreman	2
Truck Drivers	6
Granite Cutters	2

Bridges and Tunnels  
Maintenance and Operation  
Bldg. Maint Supt. R. Davidson \*

Signalman	7
Stationary Engineers	2
Bridgetenders	10

\* Part time services from the  
Bureau of Building Repair

Asphalt Plant  
Maintenance and Operation  
Foreman M. O'Driscoll

Dryermixermen	3
---------------	---

Assigned to Other Bureaus

Watchman	1
General Laborer	1

Total Permanent Employees 152

## BUREAU OF STREET REPAIR

G. D. Spears, Superintendent

### FUNCTIONS

The functions of the Bureau of Street Repair remain the same as stated in previous reports:

"Routine work includes the maintenance and repair of streets and appurtenant structures such as gutters, curbs, certain sidewalk areas, center islands, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences. The bureau is responsible for the maintenance and operation of three lift bridges, the Broadway Tunnel, the Army Street Circle, the Geary-Fillmore Underpass, the Geary Masonic Underpass and several pumping stations."

Work ordered by the Director of Public Works includes traffic channelization, minor street alterations, minor construction and emergency work for the protection of the City and/or the public.

Work performed for other departments or bureaus includes the repair of pavements in Municipal Railway track areas, bus and street car yards, the repaving of trenches opened by the Bureau of Water Pollution Control, the repair of certain State Highways within the City and the yards of other City institutions. The bureau also performs other services of a varied nature.

The City's charter provides that repair or reconstruction on any one job shall not exceed a cost of \$5,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalk in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

"Activities are further limited by state law governing the expenditures of monies from which the bureau is financed."

(Collier-Burns Highway Act of 1947, as amended and the Collier Unruh Local Transportation Development Act of 1963.)

Maintained road mileage is as follows:

County Road including Select System	844.24
State Highways (by maintenance agreements)	10.32
Total	854.56

Inasmuch as San Francisco is a combined City and County, its street and road system are one and the same.

## SUPERVISION

During the year, the following changes were made in the Bureau's supervisory team: Mr. John Hart, Mr. Frank Curran and Mr. Albert Toussaint were appointed to the permanent position of 7282 Street Repair General Foreman. Each General Foreman directly supervises a division of the Bureau's street repair force.

Mr. William Sheehy was permanently appointed to the position of 5171 Street Repair Assistant Superintendent on October 27, 1976.

The above appointments filled long standing vacancies and brings the Bureau's supervisory force to full strength. The supervisory force is composed of a Superintendent, Assistant Superintendent, three General Foremen, and an Asphalt Plant Foreman and the part time services of a Building Maintenance Superintendent.

## RETIREMENTS

During the last year, the following employees were retired and recognition is given for their faithful service.

STANLEY ANDERSON	General Labor Foreman	20	Years
VICENT FITZPATRICK	Asphalt Finisher	20	"
FRANK GIGLIUTO	Signalman	12	"
FRANK LUCAS	Laborer	17	"
IGNACIO MANISCALCO	Laborer	18	"
EDWARD RICCI	Bridge Tender	13	"
JOSEPH SCULLION	Laborer	20	"
HENRY UPHOFF	Laborer	24	"
AUGUSTINE VEGAS	General Labor Foreman	13	"

### DECEASED:

EDWIN BURKE	Truck Driver	20	Years
-------------	--------------	----	-------

## EQUIPMENT

Replacement equipment procured during the year included one automobile, one asphalt emulsion distributor and an RP 30 Galion Road Planer. Delivery is expected soon of a 6 yard dump truck.

The Road Planer replaced a nineteen year old oil burning machine. The new machine removes pavement to a width of 3 1/2 feet by means of a hydrostatically driven drum which has up to 131 carbide-tipped steel bits that reduce the old surface to granular form. The need to heat the area being planed has thus been eliminated, saving an estimated 15,600 gallons of stove oil per year and making the operation ecologically acceptable. The new machine is quiet, fume and smoke free, and practically dust free.

Cleanup operations of the planed area are presently being effected by means of a scoop loader and a crew of laborers. The inflexibility and excess width of the scoop loader bucket prevents efficient adjustment to the width and angle of cut of the planer. This has prevented elimination of hand work and slows planing time to accommodate cleanup time.

Consideration is being given to include a request in the next years budget for a Vac-All or belt loading machine to accelerate cleanup time and eliminate the need for three General Laborers.



NEW GALION ROAD PLANER

# MAJOR WORK PERFORMED

	UNIT	QUANTITY	TOTAL COST	UNIT COST
Asphalt Resurfacing- Hand Asphalt Paving (120.43 Sq.Ft. Per Ton)	Sq.Ft. Tons	35,166 292	\$ 16,680	.47 57.12
Asphalt Resurfacing- Machine Asphalt Paving (132.96 Sq. Ft. Per Ton)	Sq.Ft. Tons	4,058,633 30,525	810,048	.20 26.54
Asphalt Patching (143.53 Sq.Ft. Per Ton)	Sq.Ft. Tons	509,269 3548	395,112	.78
Asphalt Paving (Cut-Out)				
Compressor Work	Sq.Ft.	19,931	16,942	.85
Asphalt Paving (111.27 Sq.Ft. Per Ton)	Sq.Ft. Tons	68,781 618	41,606	.61
Cleanup			26,011	
Concrete Curb Patching			8,293	
Concrete Curb Replacing	Lin.Ft.	23,756	147,407	6.21
Crack Sealing				
Sealing	Lin.Ft.	417,970	131,523	.315
Cleanup			49,661	.119
Total			181,184	.434
Concrete Pavement	Sq.Ft.	7,127	13,424	1.88
Sidewalks Reconstructed	Sq.Ft.	96,870	158,030	1.63
Road Planing	Lin.Ft.	372,614	168,975	.45
Slide & Debris Cleanup			143,680	
State Highways			929	
Work for other Bureaus & Dept.			218,333	
Concrete Saw Work	Lin.Ft.	6,626	13,596	2.05
Patching Street Structures- Steps, Walls Etc.			39,408	
Handicap Ramps	Each	344	\$ 54,071	157.21

## SLURRY SEAL

The Bureau experimented applying slurry seal on three blocks of Oakdale Avenue between Third Street and Rankin Street. Slurry seal is a mixture of emulsified asphalt and coarse sand, applied to pavement about one quarter inch thick. It seals the pavement, covers minor defects and provides a non slip riding surface. Equipment required for the project was rented.

The Bureau intends to develop a slurry seal program when funds become available for equipment.

## GREAT HIGHWAY

Wind blown sand covering the Great Highway roadway and adjacent streets was more of a problem this year than any other in memory. The upper roadway from Lincoln Way to Sloat Boulevard was closed to traffic on ten occasions for a total of 69 days. Cleanup costs to the City amounted to \$60,783.

In addition to the traffic hazard engendered by sand on the pavement, sand erosion by encroachment of the ocean endangered the lateral support of the westerly roadway. This incursion created an emergency situation. The Bureau's forces, the U.S. Army and the Golden Gate National Recreation Area mobilized men and equipment to fill in the washed out areas. A loader and operator was also rented from the State of California, Department of Transportation.

A number of studies are now being conducted to determine the best permanent solution to the problem.



U.S. ARMY MOBILIZATION AT GREAT HIGHWAY

# MUNICIPAL ASPHALT PLANT

Asphaltic mixtures produced at the Municipal Asphalt Plant during 1976 - 77 were as follows:

COMPOSITION - %						
Mix Designation	Tons	Asphalt	#6	5/16"	5/8"	1 1/4"
Surface	29	8 1/2	91 1/2			
School	3272	7	60	33		
Topeka	31,768	6	45	25	24	
Binder	891	3 1/2	21	28	22 1/2	25
Cold	<u>64</u>	*	35 1/2	27 1/2	30	
Total	36,024					

\* 1% Asphalt and 6% Pacific Specification 300 fuel oil.

Aggregates were screened into "hot bins" from a combination of coarse graded sand and three sizes of gravel. Production costs for the 36,024 tons produced during the year were as follows:

Direct Labor	\$ 73,695	or	\$ 2.05	per ton
Indirect Labor	3,773	or	.10	per ton
Overhead	27,581	or	.77	per ton
Material	234,203	or	6.50	per ton
Gas, Electricity, Etc.	12,293	or	.34	per ton
Total	351,545	or	9.76	per ton

## Asphalt Purchased

Pacific Pavements	1244 Tons @	\$12.00 per ton =	\$ 14,928
		+ .065 Tax	970
		Total	\$ 15,898
		Cost Per Ton	12.25*
		*30.9 % Higher Than Street Repair Asphalt Production Costs	

During September 1976 the asphalt plant was shut down for 16 days for installation of a new burner and rebuilding of the mixer. Asphalt was supplied by purchase from Pacific Pavement during days of complete shutdown.

During March 1977, the storage bin loading elevator belt broke. Asphalt for paving crews was furnished during repair from aggregates already stored in bins.



# BRIDGES, TUNNELS AND UNDERPASSES

Bridge openings during the past year and the previous five years were as follows:

YEAR	THIRD STREET	FOURTH STREET	ISLAIS CREEK
1976 - 77	891	592	369
1975 - 76	985	748	816
1974 - 75	994	612	258
1973 - 74	1,014	792	883
1972 - 73	944	642	700
1971 - 72	776	558	862

During the year the Third and Channel streets bridge was closed to marine traffic for the month of March 1977 to replace the west side drive pinion gear. This work was performed by Thomason Construction Company and included sand-blasting and painting of the bridge.

The east fender pilings of the Islais Creek Bridge which were accidentally damaged on March 26, 1977 by the cargo ship Stol Hippo, have been repaired by the De Narde Construction Company.

The failure of one hydraulic locking unit at the Islais Creek Bridge necessitated shipping this unit to Los Angeles, California for repairs since no local services were available.

At the end of the fiscal year 411 lamps were replaced in the Broadway Tunnel. Relamping and cleaning will continue into the present fiscal year.

## BROADWAY TUNNEL

### VENTILATION - FAN OPERATING TIME

YR. ENDING  
June 30

	SLOW HOURS	WESTBOUND TRAFFIC		EASTBOUND TRAFFIC		SLOW HOURS	FAST HOURS	%
		%	HOURS	%	HOURS	%	HOURS	%
1977	180.5	2.06	19.4	.22	145.4	1.65	87.5	.99
1976	225.1	2.56	2.2	.02	111.3	1.29	96.6	1.10
1975	272.9	3.11	1.6	.01	144.1	1.64	51.1	.58
1974	296.9	3.39	2.0	.02	58.8	.67	45.4	.52
1973	227.0	2.59	6.4	.07	96.9	1.10	44.3	.50

# GEARY - FILLMORE PUMPING STATION

Pump operating hours during the last two years were as follows:

YR ENDING

June 30

	PUMP No. 1 HOURS	%	PUMP No. 2 HOURS	%
1977	298	3.39	286	3.25
1976	338	3.85	327	3.72

A portable pump was installed in the Geary - Fillmore Underpass sump to draw ground water for use in tree irrigation and for cleaning of the Broadway Tunnel. There is an ample supply of ground water approximately 85 gallons per minute.

# ARMY STREET CIRCLE PUMPING STATION

YR ENDING

June 30

	PUMP No. 1 HOURS	%	PUMP No. 2 HOURS	%	PUMP No. 3 HOURS	%
1977	18.6	.21	1163.9	13.28	30.1	.34
1976	21.6	.24	19.8	.22	17.2	.20

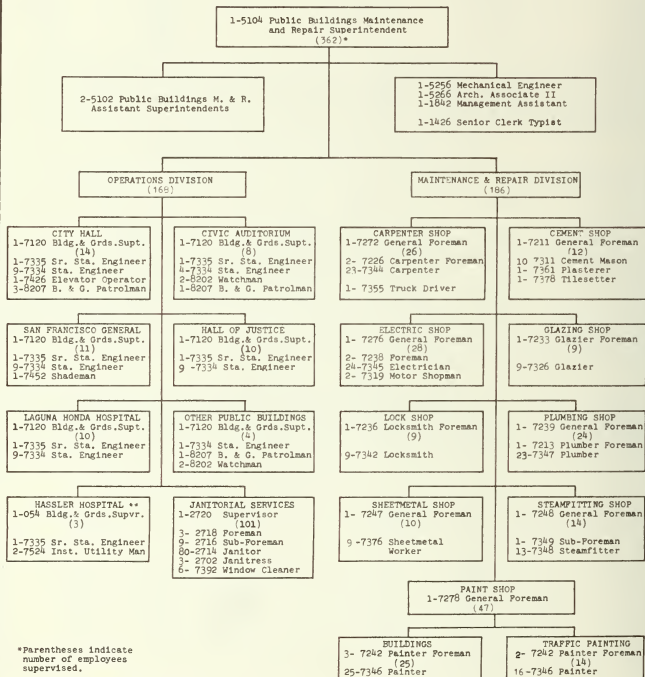
The electrical transfer switch for the emergency generator continues to malfunction.

The pump check valves were rebuilt. The number two pump had a broken check valve which made it necessary to keep this unit in operation to prevent backflow into the sump. This accounts for the high number of pump operating hours recorded on pump #2.

# ORGANIZATION CHART

## BUREAU OF BUILDING REPAIR

June 30, 1977



\*Parentheses indicate number of employees supervised.

\*\*Hassler Hospital being phased out.

## BUREAU OF BUILDING REPAIR

John Rutherford, Superintendent

The Bureau of Building Repair maintains most of the public facilities numbering some 299 buildings. With 362 employees in nearly 50 different classifications and an annual expenditure of \$9,915,539 it is the largest and most diversified unit in the department.

### FUNCTION

In addition to providing maintenance and repair to 299 buildings, the unit provides Stationary Engineers for operation of buildings and/or janitorial service for 112 of these buildings. Maintenance and repair services are provided to other agencies as well on a budget transfer or interdepartmental work order basis as indicated:

1. School Department with over 140 buildings.
2. Recreation and Park Department with over 300 buildings and structures.
3. Miscellaneous other agencies, departments or units (35).
4. Bureau of Engineering for street traffic painting and street name signs.

### ORGANIZATION

As indicated by the organizational chart, the work force is almost evenly divided between operational and maintenance functions.

The Operation Division consists of 168 positions which include janitors, window washers, stationary engineers and watchmen who are assigned to various buildings and institutions.

The Maintenance and Repair Division consists of 186 building trade mechanics representing 12 different crafts. 78 of these are permanent budgeted positions. The remaining 108 positions are classified as interdepartmental and are filled on an "as needed" basis depending upon the work load and availability of funds.

The Administrative Division consists of a Superintendent and a staff of 7 which performs the required administrative functions of planning, budgeting, development of detailed work programs for each of the 9 major shops, pre-audit cost control on approximately 456 separate cost center accounts, basic time reporting and personnel management. The Engineering and Architectural Team makes frequent inspections of the physical plant in connection with the bureau's preventive maintenance program and is responsible for all contract work. During the year, 25 contracts totaling \$56,431 were awarded on a competitive basis, as shown in Figure 4.

## CHANGES AND PROGRESS

Starting in January, 1977 the bureau started a 1.5 million dollar Federal Title II Program to provide additional jobs in the construction trades and catch up on deferred maintenance in public buildings. The program is on schedule and a great deal of neglected work is being accomplished with these Federal funds. The work force as of June 30, 1977 was 48 positions. The program has experienced great difficulties in that Civil Service has been unable to provide a sufficient number and type of craftsman due to the disparity in wage rates as compared to private industry.

Personnel shortage greatly reduced the level of maintenance and repair service compared to previous years. Due to the cutback in wages and fringes, a considerable number of the building tradesmen either retired or quit to return to private industry. Civil Service has been unsuccessful in recruiting qualified personnel to fill these vacated positions and this situation will continue until the wage problem is somehow resolved.

Specifications were prepared and plans made to start a test program of contracting for janitorial services starting with the Health Building. Bids were received from several firms which indicated that substantial savings can be realized and a higher level of service maintained. While contract cleaning is not without its own problems, at least they are manageable. The Civil Service janitorial operation is beset with so many serious problems in so many areas that delivering an acceptable level of service seems almost unattainable under present circumstances.

The School Department announced plans to develop their own maintenance shops and has asked that we allow the transfer of a large number of mechanics to their department to staff these new shops. While the desire to build up their own organization is understandable, the duplication in shop facilities, equipment, vehicles and management cannot avoid increasing the overall costs of work. As our total interdepartmental work load shrinks, while fixed cost remain the same, the overhead percentage will have to be increased, further raising the cost of doing business.

## INTERDEPARTMENTAL WORK

The volume of interdepartmental work as shown in Figure 1 was up 1.8% from the previous year. The School Department continues to be the largest single account with expenditures of \$1,702,507 annually. During the year approximately 14,710 work requisitions were completed which averaged 56 per work day. Analysis of costs show that about 38% of all miscellaneous school jobs cost \$25.00 or less and about 80% cost \$100.00 or less. Vandalism continues to be a major problem with the schools, as well as with the Recreation-Park Department. The I.D. overhead averaged 59.8%. The overhead consists of such items as retirement, social security, workman's compensation, sick leave, vacation, etc., over which the bureau has no control.



MISSION STREET- REDESIGN AND  
REPLACEMENT OF SIDEWALK FURNITURE  
TO PREVENT FURTHER DAMAGE FROM  
TRUCK TRAFFIC.



FABRICATION OF VARIOUS TEST  
APPARATUS USED BY CIVIL SERVICE  
IN FIREMAN'S EXAMINATION.

## PROBLEMS

While Title II has helped to reduce the backlog of deferred maintenance in some specific areas such as painting, other higher priority work is being neglected due to two factors. One is the shortage of regular Civil Service employments because of the wage problem, budget reductions and cutbacks for mandatory salary savings. The other factor is the dramatic change in the quality of eligibles certified by the Civil Service staff. Since the change in salary setting procedures craftsmen certified to us as qualified and competent do not possess the expertise which we have become accustomed to expect in these men. Unless this trend is stopped and reversed, the bureau will be unable to perform even its most elementary and basic maintenance function.

## FUTURE

The future prospects for solving these chronic problems and revitalizing the unit seem poor. As inflation and the cost of new social programs push the tax rate ever higher, it is anticipated that the regular Civil Service force will be reduced and offset by additional Federally funded personnel such as those employed under CETA, Title II, Youth Corps and similar programs. While these Federal programs help to temporarily hold down the tax rate, there is serious concern as to what will happen when these programs end and the Bureau finds itself without an adequate and qualified permanent Civil Service work force to carry on this complex maintenance program.



100 H.P. motor coming out of the insulating dip tank after rewinding.



## PROPORTIONAL EXPENDITURES OF ALL KINDS

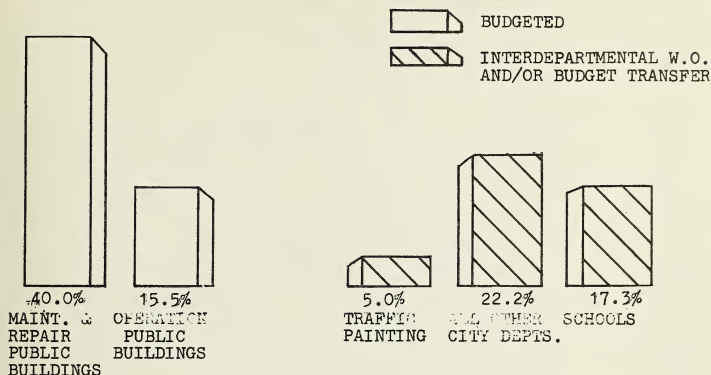


Figure 1

## PERSONNEL ASSIGNMENT

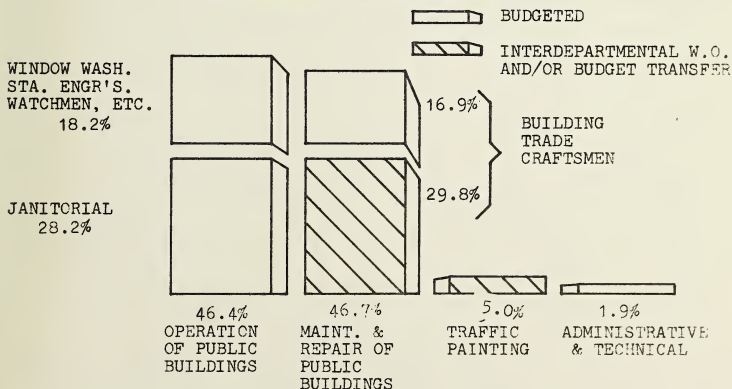
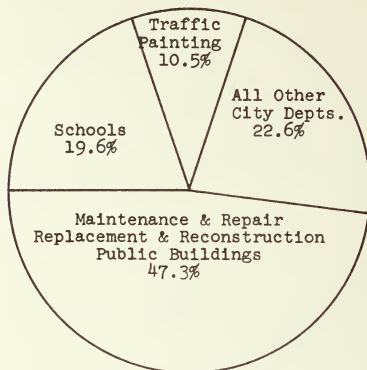


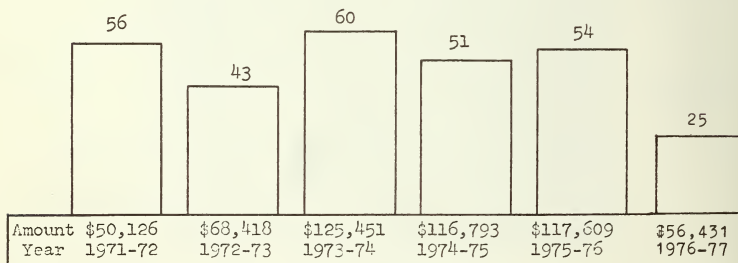
Figure 2

## ASSIGNMENT OF BUILDING TRADES PERSONNEL (187 Employees)



**Figure 3**

## INFORMAL CONTRACTS AWARDED 1971-2 THRU 1976-7



**Figure 4**

PUBLIC BUILDINGS UNDER THE JURISDICTION OF THE DEPARTMENT  
OF PUBLIC WORKS FOR MAINTENANCE AND REPAIR

<u>DEPARTMENT</u>	<u>NO. OF BLDGs.</u>	<u>TOTAL SQ. FT.</u>	<u>ANNUAL EXP. (A)</u>
Fire Department	61	623,000	\$ 207,965
Juvenile Court			
Hidden Valley Ranch	4	42,712	14,526
Log Cabin Ranch	16	32,000	20,900
Youth Guidance Center	17	202,330	74,162
Police Department (Stations)	10 (C)	101,293	46,706
Hall of Justice	1 (C)	580,500	238,483
Public Health			
Emergency Hospitals	5	33,352	15,308
Community Mental Health	7	100,000	10,356
Health Center Bldgs. and	7 (C)	179,550	20,600
Health Centers	4 (R)	5,900	37,860
Laguna Honda Hospital	25 (C)	650,000	505,461
S. F. General Hospital	28 (C)	753,000	593,251
V. D. Center	1 (R)	10,000	5,154
Center for Special Problems	1 (R)	10,000	2,640
Public Library	23	341,943	97,162
Public Works			
City Hall and Power Plant	2 (C)	526,540	223,521
City Hall Annexes	3 (C)	37,190	20,420
450 McAllister Street	1 (C)	56,460	56,530
Maintenance Yard	9 (C)	72,890	251,638
19th Avenue Garage	1	4,400	1,320
Water Pollution Treat. Plants	35	543,330	281,990
Water Pollution Pumping Div.	18	31,325	18,590
Real Estate			
Civic Aud./Brooks Hall	2	435,400	162,281
Sheriff			
County Jails #2 and #4	7	138,970	99,970
Social Services			
150 Otis Street	2 (C)	40,900	29,526
1680 Mission Street	1 (C)	40,000	11,026
Rehabilitation Center	1	10,000	3,140
Miscellaneous Departments	19	230,594	150,270
TOTAL:	311	5,833,579	\$3,200,756

NOTES:

- (R) Indicates buildings that are rented. (Total of 12 buildings with a combined floor space of 35,305 square feet.)  
 (C) Indicates custodial and/or operational services.  
 (A) Average expenditure per square foot is \$.413.

## BUREAU OF BUILDING REPAIR

### Supervisory Personnel As of June 30, 1977

#### ADMINISTRATION:

Superintendent . . . . .	John Rutherford
Assistant Superintendents. . . . .	Norman McInnis Andrew K. Nielsen
Mechanical Engineer. . . . .	Eugene Andersen
Architectural Associate II . . . . .	(Vacant)
Management Assistant . . . . .	Leland Moglen
Senior Clerk-Typist. . . . .	Olga Sanchez

#### OPERATIONS:

Building and Grounds Superintendents -	
City Hall. . . . .	William Cody
Civic Auditorium . . . . .	John Mullane
Hall of Justice. . . . .	Jack Prudhomme
Laguna Honda Hospital. . . . .	Vincent McGarry
San Francisco General Hospital . . . . .	Carl Kriletich
Other Buildings. . . . .	Robert Davidson
Janitorial Services. . . . .	James Sullivan

#### MAINTENANCE AND REPAIR:

Carpenter General Foreman. . . . .	Leonard Anderson
Cement Mason General Foreman . . . . .	Jos. Framiglio
Electrician General Foreman. . . . .	Carlos Baumgartner
Glazier Foreman. . . . .	Wilhelm Rostok
Locksmith Foreman. . . . .	Elliott Yellin
Painter General Foreman. . . . .	Dale Thorpe
Plumber General Foreman. . . . .	Richard Conway
Sheetmetal General Foreman . . . . .	Bert Srock
Steamfitter General Foreman. . . . .	George Stahl

# BUREAU OF STREET CLEANING AND PLANTING

JUNE 30, 1977

SUPERINTENDENT

ASSISTANT SUPERINTENDENT

Clerical 1-1424 Clerk/Typist

\*Radio Dispatcher DPW Radio KME-327 1-B222 Gen. Clerk

## CLEANING DIVISION

### District #1

1-7281 Gen. Foreman  
8-7355 Truck Driver  
\*2-7215 Gen. Laborer P'man  
11-7514 Gen. Laborer  
25-7530 Street Cleaner  
12-7560 Flid. Consv. Aide

### District #2

1-7281 Gen. Foreman  
8-7355 Truck Driver  
4-7215 Gen. Laborer P'man  
8-7514 Gen. Laborer  
20-7530 Street Cleaner  
12-7560 Flid. Consv. Aide

### District #3

1-7281 Gen. Foreman  
8-7355 Truck Driver  
3-7215 Gen. Laborer P'man  
3-7514 Gen. Laborer  
21-7530 Street Cleaner  
20-7560 Flid. Consv. Aide

### District #4 (19th Ave. Yard)

1-7281 Gen. Foreman  
8-7355 Truck Driver  
4-7215 Gen. Laborer P'man  
6-7514 Gen. Laborer  
24-7530 Street Cleaner  
20-7560 Flid. Consv. Aide

### District #5

1-7281 Gen. Foreman  
8-7355 Truck Driver  
5-7215 Gen. Laborer P'man  
22-7514 Gen. Laborer  
23-7530 Street Cleaner  
12-7560 Flid. Consv. Aide

### District #6

1-7281 Gen. Foreman  
9-7355 Truck Driver  
4-7215 Gen. Laborer P'man  
10-7514 Gen. Laborer  
25-7530 Street Cleaner  
9-7560 Flid. Consv. Aide

## CETA PROGRAM

1 General Foreman  
12 Foreman  
150 Field Consv. Aides

## D.P.W. Summer Youth Work Projects

1 Coordinator  
350 Youths

## PLANTING DIVISION

1-3440 Landscaping and Street Planting Supervisor

1-1424 Clerk/Typist

### Street Landscaping

#### Street Trees:

Trouble-Shooting and Mobile Units

1-3422 Park Sec. Supv.  
10-3416 Gardener  
1-7355 Truck Driver

#### Landscaped Areas:

Stationary and Mobile Units

1-3418 Gard. Sub. P'man  
8-3416 Gardener  
3-3410 Asst. Gardener  
1-7355 Truck Driver  
15-7560 Flid. Consv. Aide

### Institutional Landscaping

Hospitals: Laguna Honda, San Francisco General

1-3418 Gard. Sub-P'man  
3-3416 Gardener  
5-3410 Asst. Gardener  
4-7560 Flid. Consv. Aide

### Sewage Treatment Plants

1-3416 Gardener  
1-3410 Asst. Gardener

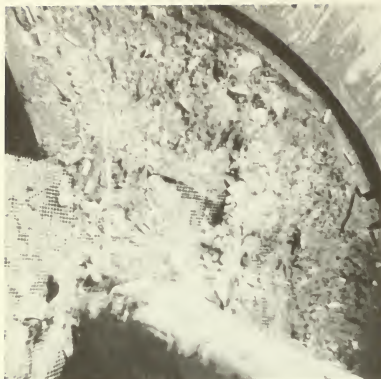
### Health Centers

1-3418 Gard. Sub-P'man  
1-3416 Gardener  
3-3410 Asst. Gardener

## Organic Gardening Project (58 Locations)

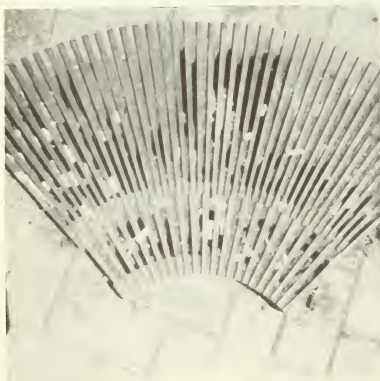
1 Coordinator  
1 Clerk/Typist

\* Comprehensive Employee Training Act



(TOP) Debris in tree basin on Market Street.

(BOTTOM) Some debris on Market Street.



# BUREAU OF STREET CLEANING AND PLANTING

JUNE 30, 1977

SUPERINTENDENT

ASSISTANT SUPERINTENDENT

Clerical 1-1424 Clerk/Typist

\*Radio Dispatcher DPW Radio KME-327 1-B222 Gen. Clerk

## CLEANING DIVISION

<b>District #1</b> 1-7281 Gen. Foreman 8-7355 Truck Driver +2-7215 Gen. Laborer P'man 11-7514 Gen. Laborer 25-7530 Street Cleaner 12-7560 Flid. Conv. Aide	<b>District #2</b> 1-7281 Gen. Foreman 8-7355 Truck Driver 4-7215 Gen. Laborer P'man 8-7514 Gen. Laborer 20-7530 Street Cleaner 12-7560 Flid. Conv. Aide
<b>District #3</b> 1-7281 Gen. Foreman 8-7355 Truck Driver 3-7215 Gen. Laborer P'man 3-7514 Gen. Laborer 21-7530 Street Cleaner 20-7560 Flid. Conv. Aide	<b>District #4 (19th Ave. Yard)</b> 1-7281 Gen. Foreman 8-7355 Truck Driver 4-7215 Gen. Laborer P'man 6-7514 Gen. Laborer 24-7530 Street Cleaner 20-7560 Flid. Conv. Aide
<b>District #5</b> 1-7281 Gen. Foreman 8-7355 Truck Driver 5-7215 Gen. Laborer P'man 22-7514 Gen. Laborer 23-7530 Street Cleaner 12-7560 Flid. Conv. Aide	<b>District #6</b> 1-7281 Gen. Foreman 9-7355 Truck Driver 4-7215 Gen. Laborer P'man 10-7514 Gen. Laborer 25-7530 Street Cleaner 9-7560 Flid. Conv. Aide

## CETA PROGRAM

1 General Foreman  
12 Foreman  
150 Field Conv. Aides

## D.P.W. Summer Youth Work Projects

1 Coordinator  
350 Youths

## PLANTING DIVISION

1-3440 Landscaping and Street Planting Supervisor

1-1424 Clerk/Typist

### Street Landscaping

**Street Trees:**  
 Trouble-Shooting and Mobile Units  
 1-3422 Park Sec. Supv.  
 10-3416 Gardener  
 1-7355 Truck Driver

### Landscaped Areas:

Stationary and Mobile Units  
 1-3418 Gard. Sub. P'man  
 8-3416 Gardeners  
 3-3410 Asst. Gardener  
 1-7355 Truck Driver  
 15-7560 Flid. Conv. Aide

### Institutional Landscaping

Hospitals: Laguna Honda, San Francisco General  
 1-3418 Gard. Sub-P'man  
 3-3416 Gardener  
 5-3410 Asst. Gardener  
 4-7560 Flid. Conv. Aide

### Sewage Treatment Plants

1-3416 Gardener  
 1-3410 Asst. Gardener

### Health Centers

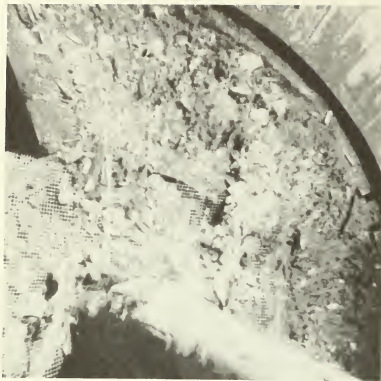
1-3418 Gard. Sub-P'man  
 1-3416 Gardener  
 3-3410 Asst. Gardener

## Organic Gardening Project (58 Locations)

1 Coordinator  
1 Clerk/Typist

\* Comprehensive Employee Training Act

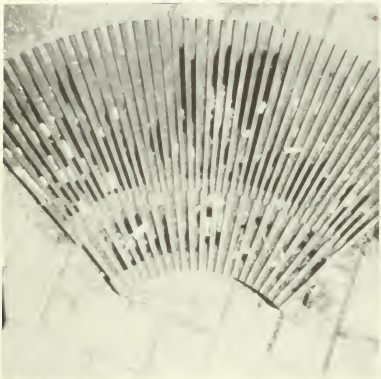




(TOP) Debris in tree basin on Market Street.



(BOTTOM) Some debris on Market Street.



DEPARTMENT OF PUBLIC WORKS  
BUREAU OF STREET CLEANING & PLANTING  
Bernard M. Crotty - Superintendent

The Bureau of Street Cleaning & Planting is responsible for cleaning 854 miles of improved streets and 55 miles of traffic islands. The Bureau also cares for 182 acres of street landscaping and over 20,500 street trees. Major subsidiary functions assigned to the Bureau include the cleaning, landscape maintenance, and structural maintenance of 19 neighborhood off-street parking lots and two garages; regular cleaning of the tile surfaces of the Broadway Tunnel, Stockton Street Tunnel, and Geary-Masonic underpass, cleaning of 10 smaller vehicular and pedestrian underpasses and 215 sets of public stairways serving residences on street too steep for conventional surfacing

Other City Departments find it expedient to use our services on a work order basis, some of these are as follows:

Cleaning and landscape maintenance at Hallidie Plaza for the Real Estate Department; Cleaning City College roads and Hall of Justice parking lot; Maintenance of landscaping at the three Sewage Treatment Plants; Cleanup after parades and civic functions for which we are reimbursed by the respective Parade Committee through the Chief Administrative Officer.

The Bureau also administers the Organic Gardening Program with highly productive truck gardens of 58 locations throughout the City.

In order to perform these duties our equipment fleet logged over 620,000 miles.

The following are some highlights of our operations during the past year.

#### RADIO

An important function of the Bureau is operation of the Department of Public Works' radio transmitter servicing 65 mobile units. This Bureau has about 30% of the mobile units and logged over 22,300 messages in 1976-77. This is 84% of the 26,700 messages transmitted Department wide.

#### ANCILLIARY DUTIES

In contrast to our relatively few duties twenty years ago, our responsibilities have steadily increased until today we perform many urban housekeeping chores in addition to cleaning streets. For example: Many people for one or another reason now think it proper to discard unwanted Christmas trees on public streets. The job of removing these trees to the disposal site falls to us. The chore alone requires virtually full time of a large truck and crew of

three for all of January. One of the fastest growing and most bothersome phenomenons of modern society, from our stand point, is the practice of plastering public facilities such as utility poles, mail boxes, benches, litter cans and the myriad other public structures with political and advertising posters. Removal of these illegally posted signs requires over four man years annually.

During the 1976 pre-election period covering October and part of November, our crews removed 10,100 illegally posted signs. This figure is derived from counts made by crews specially assigned to the chore. Those figures do not include signs removed by our other workers while routinely servicing their routes. In this light it is interesting to note that while San Francisco's population dropped 5% over the past five years, street litter and refuse increased by almost 20%. The foregoing would in itself be serious but could be accomodated with not too much difficulty. Add to this however a 33% drop in number of employees (street sweepers) from a high of 265 in 1970 to the present low of 178 and although our ranks have been supplemented by CETA employees, there still remains a large gap in productive work.

## RESOURCES

Although we have had to bear a substantial decrease in human resources, we have not sat idly by. We have instituted innovative methods and ways to take up the slack. For instance, our use of plastic bags to store street dirt for later removal by truck has exceeded even our hopes. The savings in man power has been used to take up the slack in other areas.

## CONTROLLED PARKING

In the three years since its inception San Francisco's controlled parking for mechanical street cleaning has been an unqualified success. So much so that we have expanded it to additional miles of streets in two areas. One in the north of Market Street District, comprised mainly of San Francisco's financial district and part of its contiguous hotel and posh retail store area. The other is the south of Market Street Area which is populated by light industrial and heavy commercial businesses. In the downtown area the work is performed at night.

## SUMMER YOUTH PROGRAM

The Department of Public Works has for several years performed a valuable public service by providing summer jobs for hundreds of San Francisco's underprivileged young people. The emphasis has usually been on quantity; that is, how many jobs could the Department create? Until recently little regard could be given to the interest and need of the individual participant.

## LITTER PREVENTION

There is a recently popular cliché that says "A bureaucrat will never do anything to either diminish or eliminate the problem he was hired to solve."

Well beginning in January of 1976, San Francisco's Mayor George Moscone decided to test this theory by being the first Mayor of a large U.S. City to embrace the "Clean Community System", C.C.S. for short.

This model litter reduction program was developed jointly by Keep America Beautiful, the American Public Works Association and the Human Resources Institute of Morristown, New Jersey. It is a behaviorally based system. In essence a method of dealing with the litter problem rationally by behavior modification.

The C.C.S. has four main components which took three years of research to develop: Updated Ordinances, Improved Technology, continuous education and effective enforcement. Remove any one of the four and the rest will not do the job.

This system proved highly successful in tests in several Cities such as Macon, Georgia, and resulted in reductions of litter as high as 70%.

In February 1976, the Board of Supervisors at the request of Mayor Moscone, passed a resolution approving adoption of the Clean Community System for San Francisco.

Credit for San Francisco's adoption of the nationally acclaimed C.C.S. should be shared by several people but large share of the credit belongs to the California Anti-Litter League. C.A.L.L. constantly sold the benefits of C.C.S. through film and slide presentations, letters, frequent reminders and many contacts with those in San Francisco who could bring the C.C.S. concept to us.

## DROUGHT

San Francisco along with many other areas of the United States has experienced a very serious water shortage. A shortage of rain not only affects landscaping but street cleanliness is diminished substantially in a water shortage because the natural cleansing action of the rain which normally removes most of the accumulated soil from pavements and other urban surfaces was lacking this year. It also cleans such items in the City landscape, as statues, benches, street lights and other things exposed to the elements.

Regrettably, the lack of rain this past couple of years has left our urban landscape in a dusty grimy unattractive condition. Add to this the prohibition of using water to flush streets and the result is a scene similar to looking through soiled eye glasses. Until the rain returns there is nothing we can do about this problem.

This year, the Department of Public Works has made a fundamental and significant change in administering its Summer Youth Program. Where practicable, training was emphasized and every effort made to match the students interests and school preparation with a suitable job. By doing so, we hoped the students would see the relationship between requisite job skills and school preparation.

It was with this philosophy that the Department of Public Works, in cooperation with the San Francisco Unified School District established a very unique work-training program for a select number of male and female students from John O'Connell School of Technology. Basically, this program made it possible for the Department of Public Works, for the first time, to suitably place students from a specialty high school in job-training positions that are compatible with their school courses. For instance, those students in the program enrolled in carpentry courses at John O'Connell School were appropriately placed in the Department's Carpenter Shop where they had an opportunity to observe and work with Journeymen carpenters and cabinet makers. Students enrolled in sheetmetal, electrical, building maintenance and so forth were placed in positions appropriate to their training. Also, for the first time, school credit was available for this work. In short, the summer youth work-training positions provided by this Department served as an extension of the classroom to better meet the need of the student.

Following is a table listing the eight Bureaus in the Department of Public Works whose cooperation added to the success of this unique program.

<u>BUREAU</u>	<u>FUNCTION</u>	<u>PARTICIPANTS</u>
Architecture	Generally assisting architects	5
Building Inspection	Working with building inspectors, professional and clerical employees	40
Building Repair	Working with various building trades-men shop-field	16
Engineering	Assigned to Division such as, Sanitary, construction, street inspection, surveys	13
Personnel	Preparing timerolls, etc	2
Street Cleaning & Planting	Fire Prevention (Weed Abatement) Landscape Maintenance	110 24
Street Repair	Asphalt Plant & clerical duties	6
Water Pollution Control	Assisting in Treatment Plants	<u>9</u>
Total		225

## LANDSCAPING & STREET PLANTING DIVISION BUREAU OF STREET CLEANING & PLANTING

The Landscaping and Street Planting Division is presently taking pause to assess its responsibility and also the resources the City is able to provide for the maintenance and care of its 20,500 trees and 182 acres of landscaping. As with every aspect of municipal government the Division has felt the heavy hand of fiscal restraint. Although we are attempting to care for all areas in our charge, of necessity some areas have had their maintenance reduced. The unexpected natural phenomenon, the 1976-77 drought has exacerbated this reduction in care. Some areas have suffered a more deleterious effect than others. A partial explanation of this lies in the original choice of plant material. As recent periodical literature has pointed out, some plant choices have little place in a California landscape because of their high water consumption. With this in mind the Division is exploring the possibilities of replacing this type of vegetation with plants more at home in California's dry summer climate.

### NEW AREAS

Although a minimal area was installed under contract by the City this year, the Division finds itself accessioning over 900 trees to its charge. Four hundred and seventy-two London Plane trees planted along Market Street; 270 trees of various species in the Western Addition and 119 in the India Basin area accounted for the major portion of this new responsibility. Again the 389 young trees from the San Francisco Redevelopment Agency will require extended care until they acclimatize themselves. The Market Street trees present quite a different problem, that of high maintenance. In addition to the usual pruning, irrigation, and attendant procedures, the decorative grates present the Division with the problem of debris. The accompanying photographs illustrate the high level of maintenance required.

### TRANSITIONAL PERIOD

Another circumstance which has fostered a transitional period within the Division is the loss of veteran employees trained in aboriculture. Development and training of new staff has been one of the Division's principal concerns during the past year. At the same time the Division has been re-assessing its procedures and techniques with a view toward the better implementation of its mandate. As an example, pruning techniques are under review with an end of fostering better growth for the subject trees while presenting an esthetic which will be natural and pleasing. These techniques will also shape trees growth to their often restricted location.

### LANDSCAPED AREAS & THE DROUGHT

The maintenance of landscaped areas is also under review. Some have become extensively overgrown. These consequently offer harborage for vermin and debris besides presenting a visual jungle. Renovation of these areas will restore the plants to a vigorous



healthy growing state. An adjunct to this program will be the improvement of pedestrian and vehicular safety. The drought's effect on normally healthy plants has been one of stress. Their parched arid appearance is one which only the drought's end will relieve. It should be remembered that city landscaped areas are not a natural environment and will suffer more drastically if water is withheld over a long period. The Division has been reluctant to expend the huge quantity of water necessary to keep many areas at peak level. Only absolutely essential irrigation has been the rule. The Division is aware of its two-fold responsibility - the conservation of the domestic water supply while maintaining the City's greenery during a time of natural crisis. In some instances the Division is able to irrigate with non-potable water. This water is used for juvenile trees. A minor adaptation on our tank truck has allowed more economical use of water. An independent pumping system mounted on the truck frame has eliminated the costly strain previously placed upon the truck's motor.

#### FEDERAL PROGRAMS

Auxiliary programs continue to be thrust upon the Division. These programs, the Neighborhood Initiated Improvement Projects and the Bi-centennial Awards Program, have proven extremely popular and successful. Evidence of their popularity is the over 2000 application requests each program generated. In cooperation with the Planning Department the Division was called upon to process those proposals which were successful. Funded by federal revenue sharing grants these programs have diverted personnel away from the Division's own needs.

These two programs require the actual tree planting be done by the participants. As a result a sense of pride and accomplishment is engendered through the participants. Through their hard physical labor they know with justifiable pride that they have added something enduring and beneficial to their urban environment.

#### COMMUNITY GARDENS

The Community Gardens of San Francisco have expanded to their limits. The coordinator of this program reports it to be extremely successful in some areas while mediocre in others. Success in cultivation of these volunteer gardens depends upon amount of the individual home gardener is able to devote to his or her plot. Gardens are located throughout the city and in the most unlikely spots, several literally cling to hillsides. As a whole the community garden is quite successful and has been inspected by various national dignitaries including Secretary of the Interior Cecil Andrus. The Community Gardens have continued to provide San Franciscans with an outlet for their gardening abilities while often placing fresh vegetables on their tables.

#### PERMIT SYSTEM

The foregoing assistance in the federal programs is only part of the advice and aid the Division provides the General public.





Example of trees  
needing pruning  
along Sunset Blvd.

A tree which  
is sorely in  
need of pruning.



As part of the City permit system, the Division recommends suitable trees, inspects sites, and issued a revision of the rules regulating the planting of street trees. This past year saw the Division process 2,019 applications and issue 944 permits as part of its normal operations. Additionally the Division continues to act as consultant to city and other governmental agencies. Private architects and other individuals continue to seek advice and clarification as to suitable trees for San Francisco's micro-climates. The Division also answers a myriad of other questions concerning trees and plants from various sources. Some of these it can not answer but suggests other organizations which may.

#### SUNSET BOULEVARD

In many instances the trees along this thoroughfare have generally not been thinned since their installation more than forty years ago. It is now necessary to remove much dead and hazardous broken wood. Doing this may allow a higher level of traffic noises to reach fronting homes. However as illustrated in the accompanying photograph public safety demands remedial action be taken.

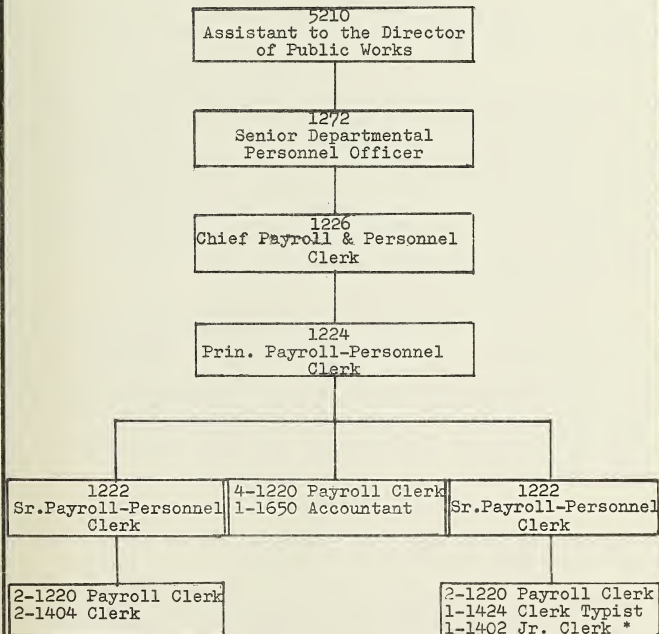
#### CONCLUSION

The Division looks to the future. With an emphasis on maintenance and renovation of existing plants, these will grow in a better and more healthy state. In all 1976-1977 has not been an auspicious year for the Landscaping and Street Planting Division. It finds itself re-aligning its priorities with an emphasis on its maintenance function. The drought, loss of experienced manpower, and the addition of new responsibilities have made the year one of transition. What it will lead to will be the subject of the 1977-1978 report.

#### BRIAN FEWER

Mr. Brian Fewer, Division supervisor since its inception in 1955, retired. His years of service left San Francisco with an indelible mark of green upon its streets. This greening earned the City an international reputation for its planting program. Prior to retirement in August 1976, it can safely be said his efforts accounted for the planting of 170,000 trees spread throughout San Francisco.. Brian Fewer can not be praised adequately for the herculean effort he led in the City's behalf.

ORGANIZATION CHART  
BUREAU OF PERSONNEL ADMINISTRATION



\* Position in General Office Budget;  
responsibility for assignment only

## BUREAU OF PERSONNEL ADMINISTRATION

Albert C. Ambrose, Senior Departmental Personnel Officer

### FUNCTIONS

The Bureau of Personnel Administration is the central personnel agency for the Department of Public Works, and a service bureau to all other operating and service bureaus of the department.

The Supervisor of the Bureau of Personnel Administration advises the Director, the Assistant Director, the bureau heads, line supervisors and other department employees on matters relating to classification, salary, discipline, assignment, transfer, time reporting, employee evaluation, Civil Service rules and regulations, Board of Supervisors ordinances and resolutions, the City Charter, the policies of the Mayor's and Chief Administrative Officer's offices, and other personnel transactions. The Bureau Chief also acts as liaison officer between the department and the Civil Service Commission, the Controller's office and the Mayor's office in matters of personnel administration.

The staff of the Bureau of Personnel Administration is directly involved in the preparation of all departmental time-rolls and the processing of all personnel transactions; including Civil Service employee sign-up and assignment, Non-Civil Service and Limited Tenure sign-up and assignment, the keeping of sick leave, vacation, overtime earned, personal and educational leave records, the processing of disciplinary cases, the requisitioning for permanent and temporary employments, some phases of payroll distribution, and other personnel transactions.

### ACTIVITIES FOR THE YEAR

The operations of the Bureau of Personnel Administration in fiscal year 1976-77 included the following:

Preparing and processing 1,938 time-rolls involving the expenditure of approximately \$20,787,820.00. Included in this payroll expenditure was a substantial amount for temporary employees, plus substantial disability payments.

Processing 291 requisitions for permanent Civil Service employees to fill vacancies due to deaths, resignations, transfers, retirements, etc.

Processing 542 requisitions for temporary Civil Service employments due to vacation, sick leave, personal leave, reclassifications, replacements, etc. However, because of difficulty in recruiting Civil Service employments, it was necessary to employ 932 Non-Civil Service employees for these authorized positions.

Processing 319 accident reports.

#### PERSONNEL STAFFING

On March 16, 1977, Mr. Albert C. Ambrose left the Bureau of Personnel Administration to accept a promotional position as Division Manager, Personnel with the Civil Service Commission.

Mr. Ambrose served as the Senior Departmental Personnel Officer since December 1963 and though we were sorry to lose him, we know the City of San Francisco will benefit greatly from the experience he gained while working in this operating department.

Bureau headquarters are at 253-260 City Hall, where the Bureau Chief and the bulk of his staff are located. A listing of the bureau's personnel is as follows:

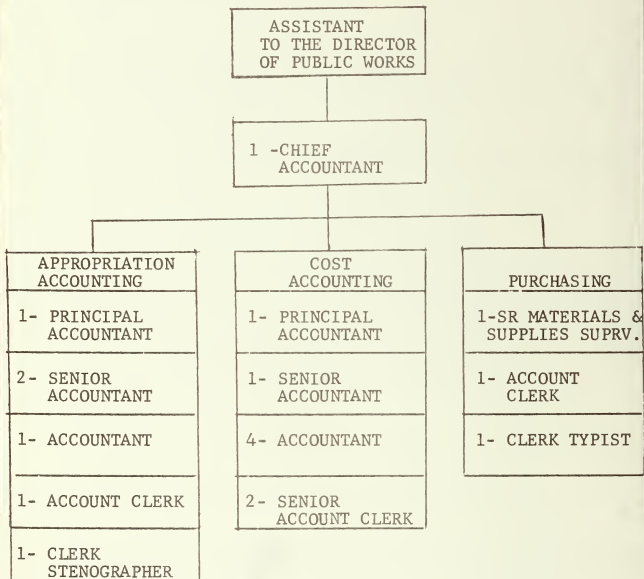
1	1272	Senior Departmental Personnel Officer
1	1226	Chief Payroll and Personnel Clerk
1	1224	Principal Payroll and Personnel Clerk
2	1222	Senior Payroll and Personnel Clerk
8	1220	Payroll Clerk
1	1650	Accountant
1	1424	Clerk Typist
2	1404	Clerk
1	1402	Junior Clerk (see Organization Chart)

DEPARTMENT OF PUBLIC WORKS

BUREAU OF ACCOUNTS

ORGANIZATION CHART

JUNE 30, 1977



TOTAL PERSONNEL 18

BUREAU OF ACCOUNTS  
R.Small, Acting Bureau Chief

FUNCTIONS AND ORGANIZATION

The Bureau of Accounts controls the following operating functions: purchase order requisitions, sub-storeroom and inventories, automotive expenditures; work order job costs and invoicing; side sewer job deposits and refund accounts; Federal, State and other trust funds, State gasoline tax subventions and bond fund accounts; capital improvements accounts for the General Fund, and Recreation and Park Department Fund; the cash revolving fund; and budget preparation and controlling accounts. This bureau has also assumed the complex and involved accounting responsibility in connection with expanding the city sewage treatment facility construction program under the Federal and State grants.

This Bureau is organized as three divisions under the Chief Accountant. They are Appropriation Accounting, Cost Accounting, and Purchasing. It maintains an office at 2323 Army Street to serve the Maintenance Yard Bureaus and an office at 450 McAllister Street, Room 502, to serve the City Hall Bureaus.

APPROPRIATION ACCOUNTING

This Division maintains accounts showing allowances, reserves, allotments, expenditures, encumbrances, and balances, for all funds under the control of this department. These accounts form the basis of controlling all transactions to assure that funds are expended for the purpose for which they were appropriated.

In addition to maintaining all of the operating accounts this Division handles the fiscal processing for formal contracts covering street improvements, sewers, sewage treatment plant, schools, hospitals, firehouses, recreation and park improvements, and numerous capital projects for other city departments.

The preparation and consolidation of the annual budget is also a responsibility of this Division.



## COST ACCOUNTING

This Division maintains accounts showing allowances, expenditures by type, encumbrances, and balances for all work orders received by this Department.

In addition, job costs are maintained for many aspects of the Department's operations such as cost of traffic painting, cost per mile of highway maintenance, cost of side sewer installations and cost of asphalt production. This Division compiles costs to repair damage to city property under jurisdiction of this Department and forwards a bill to the responsible party. These costs amounted to \$62,659.97 for fiscal year 1976-77 and embraced 88 cases covering damages to automotive equipment, street structures, bridges, street signs, traffic signs, street plantings, traffic signals, traffic devices, and damages to public buildings.

## PURCHASING

This Division is responsible for supplying equipments, materials, and supplies for the varied activities of this Department, the sub-storeroom and the material yard. During fiscal year 1976-77, this Division processed 6,146 Requisitions for Purchase Orders and/or Revolving Fund Orders in the total amount of approximately \$2,774,964.12 involving 30,730 items. In addition, 4,607 delivery orders involving 18,428 items, 5,576 storeroom tags involving the delivery of 16,728 items and 49 requisitions on the storekeeper involving 735 items were issued.

# OPERATING BUDGET OF THE BUREAU

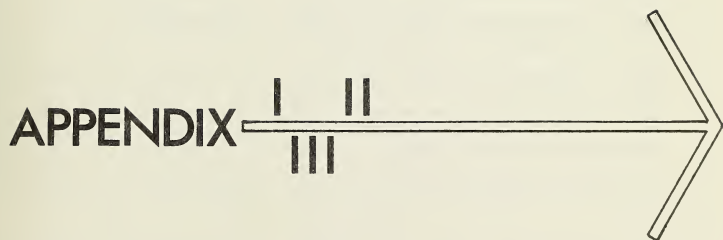
<u>PURPOSE</u>	<u>ALLOWANCES</u>		<u>EXPENDITURES</u>	
	1975-76	1976-77	1975-76	1976-77
Permanent Salaries	\$151,288	\$158,540	\$136,883	\$126,333
Overtime	500	-0-	500	-0-
Holiday Pay	972	-0-	938	-0-
Contractual Services	7,150	10,850	7,150	10,850
Materials and Supplies	1,658	1,612	1,570	1,431
Equipment	-0-	783	-0-	728
Fixed Charges	35,245	40,700	26,292	32,430
Services of Other Depts.	86,521	87,204	183,049	114,372
Revolving Fund	-0-	75,000	-0-	75,000
TOTALS	<u>\$283,334</u>	<u>\$374,689</u>	<u>\$356,382</u>	<u>\$361,144</u>

## WORK ORDERS TO DEPARTMENT FISCAL YEAR 1976-77

<u>PERFORMING BUREAU</u>	<u>NUMBER OF</u>		<u>TOTAL</u>
	<u>COST</u>	<u>ACCOUNTS</u>	
Architecture	120		\$596,493
Building Inspection	19		90,275
Building Repair	517		4,080,477
Central Permit	6		16,554
Engineering	375		8,012,964
General Office Contracts	124		142,891,869
TOTALS	<u>1161</u>		<u>\$155,688,632</u>

# DEPARTMENT BUDGET

<u>BUREAU</u>	<u>Allowance</u>		<u>Expenditure</u>	
	<u>1975-76</u>	<u>1976-77</u>	<u>1975-76</u>	<u>1976-77</u>
<u>General Fund</u>				
Accounts	\$283,334	\$374,689	\$356,382	\$352,816
Architecture	202,975	218,850	202,757	218,805
Building Inspection	3,171,301	3,053,005	2,733,573	2,855,816
Building Repair	6,147,637	6,229,438	5,913,142	6,165,656
Traffic Painting	505,850	500,359	468,859	469,628
Central Permit	177,443	186,367	160,437	171,864
Engineering	2,797,838	2,702,572	2,606,182	2,496,520
General Office	717,703	657,149	638,592	544,125
Personnel Administration	158,918	155,169	150,949	140,008
Water Pollution Control				
Waste Water Pumping	501,856	614,375	497,212	585,326
Treatment Division	5,700,130	5,837,536	5,013,386	5,192,146
Sewer Repair	2,982,751	2,991,252	2,526,397	2,597,476
Street Cleaning	6,767,343	6,305,459	5,432,158	5,688,647
Capital Improvement	1,659,300	1,816,368	1,961,989	970,929
<u>SPECIAL GAS TAX STREET IMPROVEMENT FUND</u>				
Construction	643,000	356,500	570,386	477,285
1.04 Cent Fund	2,692,247	2,038,573	462,316	474,315
<u>Road Fund</u>				
Street Repair	4,379,250	4,509,500	3,657,017	3,869,274
Traffic Engineering	2,227,498	2,247,383	2,084,004	2,007,144
General Maintenance	1,836,732	2,033,108	1,862,767	2,027,206
Construction	20,004	20,004	484,092	712,841
Street Planting	708,307	705,296	603,348	657,082
1.04 Cent Matching Funds	-0-	-0-	10,012	105,300
TOTAL	<u>\$44,231,522</u>	<u>\$43,552,952</u>	<u>\$33,395,957</u>	<u>\$33,730,211</u>



APPENDIX I

Bureau of Engineering Current

Contract Data Summary

Showing All Contract Work

Awarded or Underway

July 1, 1976 to June 30, 1977

Table	Type of Construction	No. Awarded	Value of Contracts Awarded	Amount Earned FY 76-77
A	Street Construction and Reconstruction	3	\$ 85,791.	\$ 1,183,512.
B	Channelization and Traffic Signals	4	1,811,568.	1,147,134.
C	Street Resurfacing	7	1,220,009.	984,513.
D	Street Beautification and Lights	17	3,335,726.	3,598,436.
E	Recreation and Park	21	967,545.	1,310,780.
F	Buildings and Structures	3	105,956.	454,723.
G	Auxiliary Water Supply	1	120,347.	889,279.
	TOTAL CONSTRUCTION	56	\$ 7,646,942.	\$ 9,568,377.
H	Appointments	33	\$ 175,548.	\$ 186,460.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>A - Street Construction &amp; Reconstruction</b>				
23306 - Market St, 5th to 7th, Cont. #1 - McGuire & H.	12- 1-71	10-18-76	1,758,532.	18,532.
23506 - Market St, Front to 5th, Cont. #2 - McGuire & H.	4-26-72	10-18-76	2,375,621.	35,621.
Market St, Grate Purchase - Olympic	5- 1-72	9-29-76	365,667.	22,290.
Market St, Traffic Signal Purchase - Toland	5- 1-72	99%	785,940.	261,964.
Market St, Path of Gold Light Purchase - Abbott	5-12-72	99%	1,383,244.	0
23440 - Market St, Powell St. Wall - McGuire & Hester	2- 2-73	7- 8-76	520,560.	5,060.
23429 - Market St, 8th to McCoppin, Cont. #3 - Westate	9- 7-73	99%	3,154,481.	246,379.
23509 - Market St, Fremont to First, Cont. #2B - Olsen	12-21-73	6-27-77	145,133.	4,133.
23506 - Judah St, 4th to 20th Aves. Track Reconstruction - Olsen	5- 8-74	8-27-76	1,935,309.	135,309.
23774 - Filbert St. Reconstruction - Jones	6-27-75	10- 5-76	54,235.	4,235.
23933 - Sidewalk Ramps for the Handicapped #4 - Miley	3- 3-76	2-14-77	40,427.	5,427.
23707 - Cargo Way Improvements Bay Cities	5- 7-76	4-18-77	361,571.	361,571.
24007 - Sidewalk, Curb & Gutter Repairs FY 1976-1977 Annuai	8-11-76	6-30-77	23,862.	23,862.
23578 - Sidewalk Ramps for the Handicapped #4 - Thomas	1- 5-77	91%	31,600.	28,800.
23992 - Hwy St, Treat Ave. to Harrison St., - O.C. Jones	12-17-76	3-10-77	30,329.	30,329.
<b>A - Total Awarded &amp; Earned During - FY</b>	76-77		\$ 85,791.	\$1,183,512.

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>B - Channelization &amp; Traffic Signals</b>				
23736 - GVPD Traffic Signals Pre-empt Controls - Abbott	2-14-75	8-27-76	31,700.	3,700.
23723 - Traffic Signals, Cont. #10 - Abbott	8-15-75	11- 4-76	153,231.	41,931.
23523 - Various Safety Problems Locations Traffic Sig. #10 - Flatland	8-29-75	8- 4-76	46,974.	6,974.
23288 - Various Locations Signals #3 - Flatland	3- 3-76	12- 7-76	17,121.	3,621.
23817 - Traffic Signals Cont. #4 - Steiny	3- 5-76	85%	100,592.	54,600.
23930 - Traffic Signals Cont. #33 - Steiny	4- 2-76	4-11-77	81,008	81,008
23790 - Traffic Signals Cont. #21 - Brayer	8-20-76	99%	107,238.	107,200.
23727 - Ocean Ave. & Phelan Ave. Rechannelization - Olsen	9- 3-76	58%	1,444,912.	844,200.
24045 - Third St. Traffic Signals - Flatland	3-18-77	17%	22,482.	3,900.
23926 - Various Traffic Signals & Chann. Cont. #5 Abbott	3-25-77	0%	236,936.	0
<b>B - Total Awarded &amp; Earned During - FY</b>	76-77		\$ 1,811,568.	\$ 1,147,134.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>C - Street Resurfacing</b>				
23910 - Jerrold Ave, Slurry Seal - Bay Slurry Seal	10-17-75	8-19-76	21,223.	21,223.
23951 - Resurfacing of City Streets - McGuire & Hester	5- 7-76	11- 4-76	130,664.	130,664.
23741 - Third & Fourth Sts. Resurfacing - Lowrie	4- 2-76	9-20-76	193,525.	193,525.
23743 - Army St. Resurfacing - Lowrie	7-16-76	3-24-77	162,930.	162,930.
23909 - Bayshore Blvd. & Third St. Resurfacing - McGuire & Hester	8-11-76	1-18-77	137,376.	137,376.
23,742 - Geneva Ave. & 3rd St, Resurfacing - Lowrie	8-20-76	88%	149,908.	131,900.
23990 - Various Resurfacing of City Streets #2 - Lowrie	8-20-76	2-23-77	206,895.	206,895.
24011 - Bush Pine & Van Ness Resurfacing - McGuire & H.	4-13-77	0%	167,167.	0.
24016 - Resurface Streets - Various Loc. Cont. #3 - McGuire & Hester	5-18-77	0%	203,203.	0.
24023 - Resurface City Streets, Cont. #A - Lowrie	6-29-77	0%	192,530.	0.
<b>C - Total Awarded &amp; Earned During - FY</b>	76-77		\$ 1,220,009.	\$ 984,513.
<b>D - Street Beautification &amp; Light</b>				
23473 - Market St - Stewart to 7th Ave. - Constock	6-27-73	99%	470,754.	18,727.
23700 - Hunters Point Red. Area. St. Landscape Ins. Co. of N. America	9- 4-74	11-18-76	24,994.	1,494.
23701 - Market St - Furniture Christensen	9-20-74	99%	1,207,664.	97,664.
23476 - Market St. UN Plaza #1 - Olsen	1-29-75	99%	2,420,731	196,166.
23585 - Army St. Circle Landscape - Nunkdale	12-19-75	12-28-76	146,351.	67,351.
23858 - Market St. Rearrange P of G Wiring - Steiny	9-19-75	5-11-77	19,749.	1,549.
23940 - Trumbull St. Street Lights - Arc. Elect.	2-18-76	9-28-76	22,001.	4,001.
23923 - Muir Drive St. Lights - Kennedy	2-25-76	1-31-77	17,310.	7,110.
23914 - Fillmore St. Street Lights - Flatland	2-25-76	10-28-76	77,968.	45,168.
23931 - Fillmore & Sutter St. Lights - Mahoney	3-10-76	2-23-77	65,401.	62,001.
23870 - Bayshore Blvd. St. Lights - Flatland	3-19-76	99%	286,520	286,100.
23820 - Inner Richmond Protected Neighborhood Program - Annuai	5- 7-76	3-10-77	132,300.	109,700.
23864 - Haight St. Improvement Program - Tanal	5-19-76	9-30-76	19,540.	19,540.
23944 - Market St. Reconst. UN Plaza Fountain - Phase II Olsen	6- 2-76	90%	1,597,530.	1,442,300.
23830 - Valencia St. Street Lighting - Flatland	7- 9-76	99%	293,065.	293,000.
23607 - Maiden Lane Street Lights - Abbott	7-30-76	2-18-77	6,132.	6,132.
24010 - Eugenia Ave. Stairway Street Lighting - Flatland	8-20-76	4-14-77	6,944.	6,944.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
23871 - Outer Richmond & Outer Sunset Street Lights Brayer	8-20-76	8%	284,133.	242,400.
23604 - Crossover Drive Lights - Brayer	9-17-76	8%	217,252.	185,600.
23953 - Potrero Ave. Division to Army - Street Lighting and Related - Abbott	9-17-76	9%	118,881	118,800.
24014 - Newhall St. and La Salle Ave. Street Lighting and Fire Alarm Work - Abbott	9-17-76	6- 1-77	29,567.	29,567.
24035 - Market St. Phelan Monument Relocation - Olsen	9-24-76	3-23-77	46,240.	46,240.
23987 - Var. Loc. Bench Installations - Tansal	9-29-76	6-14-77	27,652.	27,652.
23922 - Trans. Pre-St. Program Folk Street Muni Passenger Platforms - Mitchell	9-29-76	0%	31,050.	0
23991 - Geary Blvd. Baker to Collins, Street Landscaping Andre	9-29-76	3-23-77	56,230.	56,230.
23954 - Army St. & 24th St Lighting - Abbott	1-12-77	94%	90,277.	84,600.
24049 - Underground Service Conversions, Cont #6 EOG&CO.	1-19-77	5- 4-77	2,500.	2,500.
24048 - Turk St. Van Ness to Gough, St. Lighting - Abbott	2-23-77	96%	12,164.	11,700.
24042 - Benches at Bus Stops Contract #3 - Tansal	3- 2-77	99%	9,555.	9,500.
23846 - Market St. Reconstruction, Cont. #5 - Olsen	3-18-77	5%	2,044,636.	105,200.
23256 - Kesar Dr. St. Light - Steiny	3-30-77	2%	59,448.	13,500.
D - Total Awarded & Earned During - FY	76-77		\$ 3,335,726.	\$ 3,598,436.

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
E - Recreation & Park				
23589 - Lake Merced Recreational Development - Valley Crest	2-28-75	1-25-77	44,873.	9,873.
23597 - Haas Park Development - Valley Crest	6-18-75	10-25-76	134,866.	23,866.
23757 - Golden Gate Park Irrigation RP-701 - Munkdale	7-16-75	12-30-76	29,734.	5,434.
23,892 - Telegraph Hill Blvd. Embankment RP-703 Osgin	9-14-75	11- 9-76	40,659.	6,659.
23,866 - Stern Grove & Others, Lighting, RP-668 Steiny	10- 8-75	12- 6-76	186,547.	66,547.
23,847 - Ocean View Playground, RP-682 & 690 - Milely	12-26-75	55%	22,791.	12,500.
23,812 - McKinley Sq. Childrens Area, RP-680 Milely	2- 4-76	1- 4-77	36,213.	6,213.
23,522 - Union Sq. Protective Lighting, RP-696 - Civic	3- 3-76	3-30-77	97,280.	63,580.
23,804 - Precita Park Irrigation RP-640 - Pittsmaurice	3-19-76	4-12-77	94,743.	70,243.
23,862 - GG Park, Muir Trellis Fund, RP-696 - Mitchell	3-24-76	3-21-77	22,577.	9,877.
23,835 - Koshland Park Develop RP-677 - Milely	4- 9-76	84%	183,405.	148,900.
23,963 - Sharp Park, Golf Course Fence, RP-707 - Anchor	4-14-76	8-31-76	4,226.	4,226.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
23,947 - Marina Small Craft Harbor Gangways, RP-141 Western	4-16-76	7-23-76	4,496.	4,496.
23,939 - Visitation Valley Park Fence, RP-720 - Alcorn	4-23-76	1-25-77	4,289.	4,289.
23,970 - Franklin Sq. Impr. RP-49 - Sibbald	5-14-76	11- 3-76	13,825.	13,825.
23,803 - Hunters Point Redev. Calver Playfield, RP-644 Tansal	6-30-76	80%	489,878.	436,800.
23,991 - Brotherhood Way Landscape & Mini Park RP-730 - Milely	7-30-76	86%	10,696.	9,200.
23,995 - S.F. Zoo Ventilation, RP-721 - Beppo	7-30-76	12- 7-76	5,320.	5,320.
23,995 - S.F. Zoo, Paving & Fencing, RP-739 - Asphalt Paving	9-17-76	4-18-77	23,365.	23,365.
23,961 - Crocker-Armstrong Playground - Play Area Rehabilitation, RP-722 Milely	9-29-76	0%	12,500.	0
23,859 - McLaren Park Development, Vic Burrows & Mansfield Sts, RP-652 Sibbald	9-29-76	5-23-77	74,439	74,439.
24,022 - Various Recreation Park Locations - Resurface Courts and Play Areas RP-743 - Melott	10- 1-76	92%	31,420.	29,900.
24,021 - Fencing Reconstruction Various Locations RP-727 - Jose Steel	11-17-76	4-29-77	12,443.	12,443.
23,948 - GGP Childrens' Playground Rehab., RP-672 Collishaw	12-31-76	31%	394,000.	123,600.
24,020 - North Beach Playground, Rehab. Lighting, RP-742 - EOG&CO.	12-31-76	99%	23,650.	23,650.
24,036 - Various Rec & Park Locations, Resurfacing, RP-748 - O.C. Jones	12-31-76	5- 3-77	34,084.	34,084.
24,029 - Candlestick Park Parking Lot Repaving, RP-741 - Asphalt Paving Co.	1-14-77	4- 6-77	5,662.	5,662.
24,003 - Rolph Playground Lighting Rehabilitation RP-732 - Abbott	2-16-77	4-27-77	33,539.	33,539.
23,962 - Joseph Lee Rec. Center - Playground Rehab. RP-718 - Munkdale	3-18-77	0%	46,576.	0
23,997 - Chinese Rec. Center, Play Area #2 - RP-735 - T.M.T.	3-23-77	1%	19,985.	3,000.
24,086 - S.F. Zoo - Woode Exhibit, RP-763 - Valentine	4-19-77	45%	86,444.	39,100.
24,037 - Zoo Rehab. Stairways & Handrails, RP-749 - Thomas	4-27-77	14%	44,864.	6,200.
24,038 - Hayes Valley Playground Rehab., RP-750 - Tansal	5-11-77	0%	37,988.	0.
24,000 - Little Hollywood Playground Dev. RP-734 Munkdale	5-11-77	0%	17,367.	0.
23,998 - Polson Playground Rehab. RP-737 - Abbott	5-27-77	0%	31,418.	0.
24,066 - Aptos Playground Rehabilitation, RP-766 - Pacific Surfacing	6-15-77	0%	12,901.	0.
24,040 - Campbell - Rutland Rutland Mini Park, RP-751 Sibbald	6-22-77	0%	6,884.	0.
E - Total Awarded & Earned During - FY	76-77		\$ 967,545.	\$ 1,310,780.



## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>F - Building &amp; Structures</b>				
23,465 - Municipal Asphalt Plant-Exhaust Gas - Mitchell	7-18-73	3-27-77	113,593.	11,093.
23,715 - San Jose Ave. Retaining Wall, Cont #3 - Paxton	6-18-75	10-25-76	398,393.	68,693.
23,906 - Main Library Annex, Ground Floor Ventilation - Collins	10-31-75	8-30-76	14,829.	14,829.
23,855 - Police Station Emergency Power - Abbott	11-7-75	7-22-76	37,278.	2,278
23,500 - Third St. Bridge at Channel St. Various Repairs - Thomason	12-19-75	5-20-77	394,924.	140,224.
23,806 - MUNI Asphalt Plant Noise Abatement - Monterey	3-5-76	4-13-77	70,800.	70,800.
23,726 - Central Radio Station Antenna Tower - R-E Corp.	3-10-76	9-30-76	49,210.	49,210.
23,994 - Tialas Creek Bridge Repair Emergency - Tibbitts	10-15-76	12-28-76	62,566.	62,566.
24,015 - Radio Station Tower #3 - Nook	10-22-76	6-9-77	35,030.	35,030.
24,032 - Reconstruct Deep Freezer in Corners Lab. - Nibbi	3-25-77	0%	8,360.	0.
<b>F - Total Awarded &amp; Earned During - FY</b>	76-77		\$ 105,956.	\$ 454,723

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>G - Auxiliary Water Supply</b>				
23,508 - Fire Protection Pump Station #1 - Diesel Drive - SAQ	5-17-74	7-12-76	791,804.	41,704.
515 - AWSG Casting Purchase Olympic	7-10-74	8-20-76	233,213.	13,213.
250 - Command & Control System for SFFD - Systems Science	8-12-74	90%	1,575,864.	390,539.
23,595 - Fire Protection, High Pressure Pump Site #2 - Daiseil	6-27-75	6-16-77	668,305.	185,005.
23,602 - (Rev) Fire Protection, Motorized Valves, Various - Underground	12-10-75	83%	207,930.	79,100.
23,709 - Fire Protection, Redi Area H-2 Cont #2 - Underground	12-17-75	10-25-76	259,299.	37,199.
23,605 - Redevelopment Area S-1, Fire Protection Phase II - Mitchell	4-16-76	10-5-76	32,819.	32,819.
23,889 - Fourth St. AWSG Extension, Cont #1 - Fairley	9-1-76	91%	120,347.	109,700.
<b>G - Total Awarded &amp; Earned During - FY</b>	76-77		\$ 120,347.	\$ 889,279.

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>H - Appointments - B of E.</b>				
80305 - Market St. - Architectural - Ciampi	10-23-68	12-21-76	99,589.	0.
Market St. Tree Purchase - Valley Crest	5-29-70	93%	436,897.	15,913.
90949 - Test Soils Soil & Plant Lab.	2-16-72	31%	1,000.	0.
92404 - Market St. - Inspection - Ciampi	6-26-72	98%	219,500.	46,909.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
<b>Traffic Sign</b>				
Purchase - Market St. - Toland	7-14-72	99%	71,079.	24,650.
94193 - Castro St. Station, BARTD	1-17-73	0%	127,191.	0.
98009 - San Jose Retaining Wall - Hawke	4-3-74	7-7-76	7,780.	6,213.
99769 - Galvez Playfield - Schadt	10-25-74	97%	35,500.	5,525.
100095 - Slide Repair Studies - Dames & Moore	12-6-74	7-26-76	5,509.	1,768.
100848 - Playground - Plans & Specs. - Painter	2-21-75	98%	24,000.	13,900.
101286 - Architectural - Services - Royston	4-4-75	93%	20,311.	1,037.
101407 - Church St. - Station - BARTD	4-16-75	0%	106,600.	0.
101475 - Evaluate Welding - Testing Eng.	4-23-75	93%	25,000.	1,152.
101585 - T.V. Surveillance - J.H.E.K.	4-30-75	7-16-76	600.	600.
102447 - Castro St. Station - BARTD	7-23-75	0%	27,000.	0.
102844 - Test Const. Materials - Hanks	8-25-75	8-26-76	2,135.	927.
102849 - Investigate Slope Failure - Dames & Moore	8-27-75	33%	2,000.	0.
103378 - Store RCP Pipe - Ameron	10-15-75	6-24-77	1,482.	1,482.
103384 - Acoustical Work - Mainieri	10-17-75	3-14-77	2,000.	1,101.
103444 & 104307 - Repair Pump St. FD. - S & Q.	10-29-75	2-9-77	13,099.	7,046.
103785 - Architectural Plans - Whisler	12-3-75	3%	35,000.	941.
103875 - Repair Venturi Meter - BIF	12-17-75	3-8-77	350.	350.
104816 - Transcript of Hearings - Schiller	4-16-76	7-27-76	100.	100.
104875A - Repair Traffic Signals - Abbott	4-23-76	8-25-76	1,139.	1,139.
105446 - Repair Leaks - Del Chemical	6-16-76	80%	1,684.	1,352.
105665 - Test Materials - Testing Eng.	6-30-76	2-4-77	2,211.	2,211.
105669 - Construction Supervision - Westling	7-2-76	35%	15,000.	5,262.
105708 - Embarcadero Station - BARTD	7-7-76	0%	7,093.	0.
106181 - Test Const. Materials - Hanks	8-18-76	30%	2,000.	593.
106397 - Repair Brick Sidewalk - Reed	9-10-76	12-20-76	4,028.	4,028.
106533 - Inspep Irrig. Controller - Protective Eng.	9-22-76	1-25-77	500.	500.
106597 - Soil Engineering for 23,727	10-8-76	8%	3,000.	233.
106934 - Sculpture for Galvez Playground - Desertrious	11-10-76	15%	55,000.	10,000.
107190 - Hunters Point Playfield - Harding	12-17-76	17%	1,500.	249.
107298 - Design Courts - Lamer & Sherill	1-5-77	0%	9,000.	0.
107305 - Site Rehab. Plan - Downey	1-5-77	6-16-77	4,975.	4,975.
107459 - Photo Service - Towill	1-21-77	4-18-77	3,398.	3,398.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
107654 - X-ray Welds - Hanks	2- 9-77	52%	1,000.	522.
107684 - Soil Consult - Various - Dames & Moore	2-16-77	2%	4,000.	79.
107695 - Test Material - Testing Eng.	2-16-77	9%	4,000.	376.
107774 - Rec-Park Design - Gensundson	2-25-77	25%	29,750.	7,437.
107839 - Test Materials - Spec. 23,727 - Hanks	3- 2-77	6-20-77	538.	538.
107872 - Acoustic Tests - S.F.P.D. - Mainier	3- 9-77	4-21-77	1,892.	1,892.
107873 - Repair Testing Machine - Pacific	3- 9-77	5-27-77	202.	202.
107977 - Material Tests, Spec. 23,833 - Hanks	3-18-77	75%	750.	560.
108018 - Zoo Design - Elks - Rutherford	3-23-77	5-16-77	4,400.	4,400.
108236 - Soils Study - Zoo - Rutherford	4-18-77	6- 7-77	2,000.	2,000.
108292 - Test Materials - Spec. 23,833 - Cal Trans	4-20-77	0%	750.	0.
108335 - Soils Study - Zoo - Rutherford	4-27-77	6-28-77	1,500.	1,500.
108343 - Design Survey - Zoo - Rutherford	4-27-77	6-28-77	3,400.	3,400.
108662 - Windmill Services - Wind Power Sys.	5-27-77	0%	5,000.	0.
108677 - Relocate Traf. Signs - Cal Trans	6- 1-77	0%	550.	0.
108804 - Tree Inspection - Market St. - Soil & Plant	6-10-77	0%	600.	0.
108825 - Zoo Archaeology Study - Chaves	6-15-77	0%	850.	0.
108861 - Acoustical Tests FDFS - Mainieri	6-17-77	0%	767.	0.
108918 - Soils Report - Zoo - Rutherford	6-24-77	0%	3,600.	0.
108919 - Soils Report - Zoo - Rutherford	6-24-77	0%	1,500.	0.
108923 - Test Well at City Hall - Pump Repair	6-24-77	0%	2,055.	0.
108942 - Inspect DPW Lab - ASTM	6-29-77	0%	950.	0.
H - Total Awarded & Earned During - FY	76-77		\$ 175,548.	\$ 186,460.

APPENDIX II  
BUREAU OF ARCHITECTURE  
CURRENT CONTRACT DATA SUMMARY

Showing All Contract Work Awarded or Under Construction  
July 1, 1976 - June 30, 1977

I Contracts Awarded During Fiscal Year 1976 - 1977			
Table	Type of Construction	Contracts No.	Awarded Aggregate Value  Amount Expended Fiscal Year 1976-1977
A	S.F. Community College Dist.	4	\$ 227,769.00 \$ 30,168.00
A-1	New School Construction	1	168,537.00 145,982.00
A-2	Misc. Alterations - Schools	3	154,811.00 64,093.00
A-3	Acoustical	0	0 0
A-4	Roofing Jobs	0	0 0
A-5	Resilient Flooring	0	0 0
A-6	Int. & Ext. Painting	1	3,500.00 3,500.00
A-7	Yard Paving	0	0 0
B-1	Fire Dept. - New Const.	0	0 0
B-2	Fire Dept. - Alterations	1	74,559.00 66,483.00
C-1	S.F. General Hospital	7	1,538,464.00 262,341.00
C-2	Laguna Honda Hospital	6	276,318.00 23,594.00
C-3	Health Center Buildings	2	1,329,589.00 9,228.00
D	De Young Memorial Museum	0	0 0
E	Youth Guidance Center	0	0 0
F	Civic Center	2	180,339.00 180,339.00
G	Hall Of Justice	2	27,509.00 0
H	Miscellaneous	12	861,739.00 223,567.00
	Sub Totals	41	\$4,843,134.00 \$1,009,295.00

II Other Contracts Under Construction During Fiscal Year 1976 - 1977			
Table	Type of Construction	Contracts No.	Awarded Aggregate Value  Amount Expended Fiscal Year 1976-1977
A	S.F. Community College Dist.	4	\$15,241,538.00 \$ 6,515,493.00
A-1	New School Construction	1	1,324,765.00 693,632.00
A-2	Misc. Alterations - Schools	16	19,277,810.00 9,332,011.00
A-3	Acoustical Work	0	0 0
A-4	Roofing Jobs	0	0 0
A-5	Resilient Flooring	0	0 0
A-6	Int. & Ext. Painting	3	19,341.00 10,885.00
A-7	Yard Paving	1	37,024.00 37,024.00
A-1	Fire Dept. - New Const.	1	584,341.00 279,249.00
B-2	Fire Dept. - Alterations	1	325,768.00 288,794.00
C-1	S.F. General Hospital	3	30,154,809.00 2,270,915.00
C-2	Laguna Honda Hospital	1	114,767.00 114,767.00
C-3	Health Center Buildings	0	0 0
D	De Young Memorial Museum	0	0 0
E	Youth Guidance Center	0	0 0
F	Civic Center	8	484,343.00 161,336.00
G	Hall Of Justice	1	12,517.00 2,618.00
H	Miscellaneous	13	8,680,256.00 3,447,050.00
	Sub Totals	55	\$76,237,279.00 \$23,154,774.00

III All Contracts Awarded or Under Construction Fiscal Year 1976 - 1977			
Table	Type of Construction	Contracts No.	Awarded Aggregate Value  Amount Expended Fiscal Year 1976-1977
A	S.F. Community College Dist.	8	\$15,469,307.00 \$ 6,545,661.00
A-1	New School Construction	4	1,493,302.00 839,614.00
A-2	Misc. Alterations - Schools	19	19,432,621.00 9,396,104.00
A-3	Acoustical Work	0	0 0
A-4	Roofing Jobs	0	0 0
A-5	Resilient Flooring	0	0 0
A-6	Int. & Ext. Painting	4	22,841.00 14,385.00
A-7	Yard Paving	1	37,024.00 37,024.00
A-1	Fire Dept. - New Const.	1	584,341.00 279,249.00
B-2	Fire Dept. - Alterations	2	400,327.00 355,277.00
C-1	S.F. General Hospital	10	31,683,273.00 2,533,256.00
C-2	Laguna Honda Hospital	7	391,085.00 138,361.00
C-3	Health Center Buildings	2	1,329,589.00 9,228.00
D	De Young Memorial Museum	0	0 0
E	Youth Guidance Center	0	0 0
F	Civic Center	10	664,682.00 341,675.00
G	Hall Of Justice	3	40,028.00 2,618.00
H	Miscellaneous	25	9,541,995.00 3,670,617.00
	Total	96	\$81,080,413.00 \$24,164,069.00

## CURRENT CONTRACT DATA 1976-77

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund
<b>A SAN FRANCISCO COMMUNITY COLLEGE DISTRICT</b>					
City College of S.F. (3533) General Construction Arntz Bros.	2-21-73	5-12-76	\$1,295,014.	\$1,136,210.	S.F. Comm. College
City College of S.F. (3688) Social Science Classroom & Lab. Bldg. (Cloud Hall East) The Pacific Company	8-23-74	90%	\$6,987,104.	\$2,516,154.	S.F. Comm. College
City College of S.F. (3721) Downtown Community College Education Center Dickman Constr. Inc. & Olickman Builders, Inc. JV	6-20-75	78%	\$6,959,420.	\$2,863,129.	S.F. Comm. College
City College of S.F. (3901) Library Carpeting Classroom & Library Bldg. James A. Smith Co.	2-9-77	4-13-77	\$ 30,168.	\$ 30,168.	S.F. Comm. College
City College of S.F. (3918) Folding Seating Addition Han's Gym Bldg. American Seating Co.	5-18-77	0	\$ 48,890.	0	S.F. Comm. College
City College of S.F. (3908) Electrical Lab. Alterations Transwestern Construction	6-8-77	0	\$ 96,417.	0	S.F. Comm. College
City College of S.F. (3932) Campus Lighting Brayer Electric Co.	6-8-77	0	\$ 32,250.	0	S.F. Comm. College
John Adams Adult School (3919) Parking Area Paving The Lowrie Paving Co. Inc.	6-24-77	0	\$ 20,044.	0	S.F. Comm. College
Total Aggregate Value and Amount Expended			\$15,469,307.	\$6,545,661.	
<b>A-1 NEW SCHOOL CONSTRUCTION</b>					
Treasure Island School (3600-R) Four Classroom Addition Mapco JV	9-25-74	8-10-75	\$ 371,234.	\$ 282,083.	Field Act Project
Chinese Education Center (3723-R) General Construction Arntz Contracting Co. & Beacon Const. Co., JV	9-5-75	4-8-77	\$ 761,742.	\$ 384,882.	Field Act Project
Mission Children's Center (3738) Addition M & H Construction Co.	9-5-75	11-9-76	\$ 191,789.	\$ 26,667.	Children's Center
Clarendon School Site (3864-R) New Handicapped Facilities Moore Construction Co.	11-19-76	99%	\$ 168,537.	\$ 145,982.	General Fund
Total Aggregate Value and Amount Expended			\$1,493,302.	\$ 839,614.	
<b>A-2 MISC. ALTERATIONS</b>					
Balboa High School (3610) Reconst. Phase I Arntz Bros., Arntz Con- tracting Co., & J.W. & Sons, Inc. JV	8-21-74	10-27-76	\$2,251,561.	\$1,333,283.	Field Act
Presidio Jr. High School (3589-R) Reconstruction Beacon Const. Co., J.W. & Sons, Inc., & K.T. & Sons, Inc., JV	8-28-74	11-1-76	\$3,432,618.	\$2,042,451.	Field Act
Horace Mann Jr. High School (3674) Reconstruction, Phase II M & H Construction Co.	9-25-74	8-26-76	\$ 439,783.	\$ 421,402.	Field Act
Raphael Weill School (3619) Reconstruction Work De Nardie Const. Co.	11-15-74	8-26-76	\$1,189,062.	\$ 745,675.	Field Act
Everett Jr. High School (3614) Reconstruction Work Nibbi Bros., Inc.	5-21-75	2-14-77	\$3,015,020.	\$ 651,276.	Field Act
Horace Mann Jr. High School (3763) Reconstruction - Phase III Nibbi Bros., Inc.	8-22-75	10-20-76	\$ 355,091.	\$ 44,767.	District
Alamo School (3822) Electrical Alterations Decker Electric Co.	11-14-75	4-26-76	\$ 4,379.	\$ 4,379.	Field Act

## CURRENT CONTRACT DATA 1976-77

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund
A-2 MISC. ALTERATIONS (continued)					
Sherman School (3761) Reconstruction Work Phase II Nibbi Bros., Inc.	10-10-75	6-1-77	\$1,217,317.	\$ 377,674.	District
Mission High School (3594-R) Reconstruction - Phase II DeNarde Const. Co.	11-14-75	97%	\$5,395,625.	\$2,312,540.	Field Act
Treasure Island School (3825) Revisions to Existing Fire & Sprinkler Alarm System Rudolph Electric	11-5-75	3-7-76	\$ 4,584.	\$ 4,584.	Field Act
Treasure Island School (3815-R) Grading & Site Work O.C. Miley, Jr. Trucking & Excavating	11-5-75	6-3-76	\$ 10,757.	\$ 1,936.	Field Act
Farragut Children's Center (3836) Kitchen & Toilet Alterations Transwestern Const., Inc.	3-12-76	3-31-77	\$ 70,313.	\$ 37,636.	Children's Center
Various - Commodore Stockton (3861) & Farragut Children's Centers Transwestern Const., Inc.	4-23-76	7-30-76	\$ 4,721.	\$ 4,721.	Children's Center
Winfield Scott School (3758) Reconstruction Work Terra Cotta Anchorage Nibbi Bros., Inc.	6-16-76	7-21-76	\$ 48,417.	\$ 48,417.	Field Act
Jefferson Nursery (3863) Toy Storage Bldg. Litchfield Const. Co.	6-25-76	9-23-76	\$ 5,863.	\$ 5,863.	Children's Center
Gallileo High School (3605) Reconstruction of East Building DeNarde Const. Co.	9-13-74	8-10-76	\$1,832,699.	\$1,295,407.	Field Act
George Washington Carver School New Elevator for the (3866) Handicapped DeNarde Const. Co.	9-22-76	87%	\$ 68,000.	\$ 53,239.	General
Various - Relocation of (3891) Existing Classroom Bldgs. Presidio Jr. High School to Clarendon School Site A & P Constr. Inc.	11-19-76	91%	\$ 13,233.	\$ 10,854.	General
J Eugene Mc Ateer High School Modification of (3907-R) Induction Boxes Colan Heating & Sheet Metal Co., Inc.	6-1-77	0	\$ 73,578.	0	General
Total Aggregate Value and Amount Expended			\$19,432,621.	\$9,396,104.	
A-6 PAINTING					
Various - Gough-Page Children's Center, Edison Children's (3848) Center - Exterior Painting J. Wm. Sorensen, Inc.	3-3-76	5-15-76	\$ 9,491.	\$ 1,035.	Children's Center
Commodore Stockton (3852) Interior Painting R.P. Paoli & Co.	5-12-76	8-13-76	\$ 6,350.	\$ 6,350.	Children's Center
Various - Francis Scott Key (3876) Annex & Jefferson School Children's Centers Interior Painting Harris Painter Contractors	6-25-76	1-3-77	\$ 3,500.	\$ 3,500.	Children's Center
Candlestick Children's Center (3873) Exterior & Interior Painting Harris Painter Contractors	6-25-76	10-26-76	\$ 3,500.	\$ 3,500.	Children's Center
Total Aggregate Value and Amount Expended			\$ 22,841.	\$ 14,385.	
A-7 YARD PAVING					
Various - Potrero Terrace (3877) Children's Center & Argonne Children's Center Renovation of play yards Tamal Const. Co.	6-25-76	2-2-77	\$ 37,024.	\$ 37,024.	Children's Center
Total Aggregate Value and Amount Expended			\$ 37,024.	\$ 37,024.	

CURRENT CONTRACT DATA 1976-77						
Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund	
B-1 FIRE DEPARTMENT - NEW CONSTRUCTION						
Engine Co. No. 3 (3486-R) General Construction Stenmark Construction	2-6-74	47%	\$ 564,341.	\$ 279,249.	Fire Dept.	
Total Aggregate Value and Amount Expended			\$ 564,341.	\$ 279,249.		
B-2 FIRE DEPARTMENT ALTERATIONS						
Central Fire Alarm (3634) Station - Alterations Wm. McIntosh & Sons Co.	5-28-75	8-2-76	\$ 325,768.	\$ 288,794.	Fire Dept.	
Engine Company #25 (3862) Renovation Balliet Bros. Const.	7-28-76	99%	\$ 74,559.	\$ 66,483.	Fire Dept.	
Total Aggregate Value and Amount Expended			\$ 400,327.	\$ 355,277.		
C-1 SAN FRANCISCO HOSPITAL						
S.F. Medical Center (3300-R) Hospital Building The Wm. Simpson Const. Co.	6-9-71	99%	\$30,090,327.	\$2,206,036.	S.F. Medical Center	
S.F. General Hospital (3446-R) Enclose Main Stairs Psychiatric Bldg. 90 A & P Construction Co.	11-28-73	6-21-76	\$ 12,090.	\$ 8,926.	General	
S.F. General Hospital (3834) Dishwasher Scrapping Table & Conveyors Madsen Constr. Co.	3-24-76	12-31-76	52,392.	\$ 55,953.	General	
S.F. Medical Center (3868) Modification of Nursing Unit 68, Interim Security Unit A & P Construction, Inc.	8-13-76	95%	\$ 23,497.	\$ 19,759	S.F. Medical Center	
S.F. Medical Center (3878) Revisions to Anesthesia Dept. Hospital Building Nibbl Bros. Inc.	7-23-76	80%	\$ 55,796.	\$ 44,623.	S.F. Medical Center	
S.F. Medical Center (3856) Security Patient Care Unit Hospital Building Arntz Bros., J.W. & Sons, Inc. & S&M Const. AJV	3-11-77	5%	\$ 645,700.	\$ 37,945.	S.F. Medical Center	
S.F. Medical Center (3857) Executive and Admin. Offices Alteration to Bldg. No. 80 Second Floor Gastro Constr. Inc.	2-2-77	17%	\$ 227,997.	\$ 34,544.	S.F. Medical Center	
S.F. General Hospital (3875) Toxicology-Chemistry Lab. Arntz Bros., J.W. & Sons, Inc. & S&M Constr.	3-9-77	12%	\$ 465,734.	\$ 50,193.	General	
S.F. General Hospital (3910) Wall Guards, Hospital Bldg. Crown Iron Works	5-27-77	0	\$ 30,000.	0	General	
S.F. General Hospital (3879) Modification of Psychiatric Unit, Patient Care Unit 78 Leon Carlen	11-3-76	95%	\$ 89,740.	\$ 75,277.	General	
Total Aggregate Value and Amount Expended			\$31,693,273.	\$2,533,256.		
C-2 LAGUNA HONDA HOSPITAL						
Laguna Honda Hospital (3835) Modernization of Laundry Facility Moore Const. Co.	6-9-76	2-23-77	\$ 114,767.	\$ 114,767.	General	
Laguna Honda Hospital (3896) Panic Hardware on Stair Doors, Life Safety Code, Phase II Madsen Constr. Co.	1-28-77	0	\$ 24,324.	0	General	
Laguna Honda Hospital (3895-R) Smoke Barrier Doors Life Safety Code Phase I Madsen Constr. Co.	4-1-77	17%	\$ 90,455.	\$ 14,108.	General	

## CURRENT CONTRACT DATA 1976-77

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund
<b>C-2 LAGUNA HONDA HOSPITAL (continued)</b>					
Laguna Honda Hospital (3905) Fire Sprinklers in Bldgs. D and G, Life Safety Code, Phase III Allan Automatic Sprinkler Corporation	4-20-77	0	\$ 29,699.	0	General
Laguna Honda Hospital (3913) Exterior Stair From Employee's Dining Room Moore Constr. Co.	4-20-77	25%	\$ 32,000.	\$ 9,486.	General
Laguna Honda Hospital (3924) Smoke Barrier Partitions & Doors - Phase IV Madsen Construction Co.	6-17-77	0	\$ 17,285.	0	General
Laguna Honda Hospital (3929) Interior Demolition Clarendon Hall for New Skilled Nursing Facility Phase II Moore Construction Co.	6-3-77	0	\$ 82,555.	0	General
Total Aggregate Value and Amount Expended			\$ 391,085.	\$ 138,361.	
<b>C-3 HEALTH CENTER BUILDINGS</b>					
Hunter's Point-Bayview (3833) Model Cities Health Center Nibbi-Lowe Const. AJV	9-24-76	5%	\$1,317,982.	\$ 0	General
Methodone Treatment Unit (3904) Dept. of Public Health Empire Const. Co.	1-26-77	96%	\$ 11,607.	\$ 9,228.	General
Total Aggregate Value and Amount Expended			\$1,329,589.	\$ 9,228.	
<b>F CIVIC CENTER</b>					
City Hall (3794) Toilet Facilities for the Handicapped H. E. Rahlmann Co.	7-25-75	6-15-76	\$ 9,584.	\$ 1,926.	General
City Hall (3771) EOP Section, New Access Protection & Security Madsen Constr. Co.	9-5-75	7-9-76	\$ 62,269.	\$ 8,042.	General
City Hall - Phase I (3760) Masonry Waterproofing & Skylight Reconst. Nibbi Bros., Inc.	9-5-75	1-31-77	\$ 172,967.	\$ 18,854.	General
War Memorial Opera House (3846) Recarpeting Conklin Bros. Inc.	2-18-76	8-17-76	\$ 26,900.	\$ 26,900.	General
War Memorial Opera House (3850) Specifications for reupholstering seats Don Ermann Associates	3-5-76	11-8-76	\$ 107,426.	\$ 54,130.	General
War Memorial Opera House (3858) Renewal of Stage Floor Wm. McIntosh & Son	3-17-76	9-7-76	\$ 65,047.	\$ 10,674.	General
War Memorial Opera House (3827-S) Safety Modifications Elevator No. 6 American Elevator Co.	5-7-76	1-25-77	\$ 33,150.	\$ 40,810.	General
War Memorial Veterans' Bldg. Curtains & Draperies (3945) Cassidy's Interiors, Inc.	7-20-77	0	\$ 7,000.	0	General
City Hall (3830) Skylight Reconstruction Phase II Transwestern Const. Co.	9-3-76	5-26-77	\$ 177,048.	\$ 177,048.	General
War Memorial Building (3892) New Lighting for Basement Banquet Room Elec. Const. & Sales Co.	11-3-76	1-24-77	\$ 3,291.	\$ 3,291.	General
Total Aggregate Value and Amount Expended			\$ 664,682.	\$ 341,675.	



## CURRENT CONTRACT DATA 1976-77

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund
<b>G HALL OF JUSTICE</b>					
Hall of Justice (3849) Alterations to Room 565 S. F. P. O. Internal Affairs A & P Construction	2-25-76	3-7-77	\$ 12,517.	\$ 3,618.	General
Hall of Justice (3914) County Jail No. 1 Steel Grilles for window Crown Iron Works	3-16-77	0	\$ 11,049.	0	General
Hall of Justice (3900-R) New Gun Security Room Enlay Construction Co.	6-17-77	0	\$ 16,460.	0	General
Total Aggregate Value and Amount Expended			\$ 40,026.	\$ 3,618.	
<b>H MISCELLANEOUS</b>					
Chinatown Branch Library (3717) Renovation Work A & P Construction Co.	10-23-74	8-31-76	\$ 22,902.	\$ 22,902.	General
Old South San Francisco (3630-R) Opera House - Renovation & Plaza Project Wm. McIntosh & Son	4-9-75	12-10-76	\$ 624,816.	\$ 141,189.	General
Hunters Point Community (3775-R) Youth Park General Construction A & J Shooter & Assoc.	1-7-76	12-2-76	\$ 443,350.	\$ 200,016.	General
Martin Luther King Pool (3818) Enclosure James Marsh Company	2-11-76	4-19-77	\$ 606,965.	\$ 533,039.	General
Garfield Square (3839) Rehab. of Natorium A & P Construction, Inc.	2-18-76	11-8-76	\$ 28,909.	\$ 11,876.	General
Department of Social Services (3675) Administration Bldg. The Wm. Simpson Const. Co.	3-10-76	39%	\$6,705,497.	\$2,363,702.	Social Services Corp.
Portola Playground (3853) Rehab. of Recreation Bldg. Transwestern Const. Inc.	4-7-76	12-27-76	\$ 51,697.	\$ 51,697.	General
Benjamin H. Swig Pavilion (3869) Carpeting, Visitors Center Hallide Plaza Coulter's Carpet Service	5-12-76	8-10-76	\$ 6,880.	\$ 6,880.	General
Francis Scott Key Monument (3829) Gen. Const. for Restoration Golden Gate Park Valentine Corp.	5-5-76	12-6-76	\$ 112,082.	\$ 87,667.	General
Excelsior Playground (3842) Renovation of Fieldhouse Moore Construction Co.	5-26-76	3-4-77	\$ 25,059.	\$ 25,059.	General
Benjamin H. Swig Pavilion (3872) Wall Covering Visitors Center, Hallide Plaza Gary S. Coulter	6-2-76	1-17-77	\$ 2,006.	\$ 2,006.	General
Benjamin H. Swig Pavilion (3871-5) Metal Letters, Visitors Center, Hallide Plaza Directional Graphics Inc.	6-25-76	9-27-76	\$ 1,017.	\$ 1,017.	General
Various Police Stations (3925) Cell Toilet Replacement (6 Stations)-Convenience Facilities for Women (8 Stations) Herbert Petersen & Sons	7-20-77	0	\$ 49,076.	0	General
San Francisco Zoological Gardens Incinerator (3865) Animal Hospital Bayco Industries of CA.	8-4-76	12-16-76	\$ 29,950.	\$ 29,950.	General
Bernal Playground Fieldhouse Renovation Work (3883) Ernie Lowe Const.	9-10-76	5-9-77	\$ 10,184.	\$ 10,184.	General
Bernal Playground Fieldhouse Lighting Work (3886) Paganini Elec. Corp.	9-15-76	3-11-77	\$ 6,336.	\$ 6,336.	General

## CURRENT CONTRACT DATA 1976-77

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended	Fund
H MISCELLANEOUS (continued)					
Bernal Playground Fieldhouse Painting Work (3885) A. Quandt & Sons	3-25-77	7-5-77	\$ 2,525.	\$ 2,525.	General
Marina Gas House Cove (3736-R) Convenience Station E. Mitchell, Inc.	9-3-76	3-31-77	\$ 73,260.	\$ 73,260.	General
Golden Gate Park (3881-R) Children's Carrousel Re-roofing Fidelity Roof Company	10-20-76	90%	\$ 14,440.	\$ 12,925.	General
Chinese Playground (3752) Recreation Bldg. & Middle Terrace Jun Kwock Tom Const. Co.	12-22-76	0	\$ 339,000.	0	General
North Of Market Senior (3894) Service Center - Remodeling 333 Turk Street Hadsen Construction Co.	1-5-77	47%	\$ 159,245.	\$ 67,360.	General
Cayuga Recreation Bldg. (3893-R) Addition Ernie Lowe, Contr.	3-18-77	37%	\$ 63,359.	\$ 21,027.	General
Glen Park Recreation (3903) Building - Renovation Erbenraut & Summers	5-11-77	0	\$ 148,100.	0	General
Noe Valley Br. Library (3897) Alterations & Additions Far West Electric	6-1-77	0	\$ 10,850.	0	General
Noe Valley Br. Library (3935) Garden Gates Crown Iron Works	6-8-77	0	\$ 4,490.	0	General
Total Aggregate Value and Amount Expended			\$9,541,995.	\$3,670,617.	

APPENDIX III

BUREAU OF SANITARY ENGINEERING CURRENT

Contract Data Summary

Showing All Contract Work

Awarded or Underway

July 1, 1976 to June 30, 1977

Table	Type of Construction	No. Awarded	Value of Contracts Awarded	Amount Earned FY 1976-77
A	Pipe Sewers	4	\$ 218,870.	\$ 2,103,325.
B	Monolithic Sewers	4	32,334,355.	86,000.
C	Water Pollution Control Plants	4	784,161.	1,063,347.
D	Pumping Stations	1	13,219,692.	2,935,500.
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	TOTAL CONSTRUCTION	13	\$46,557,078.	\$ 6,188.172.
E	Appointments	68	\$16,119,710.	\$ 7,244,932.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT RANKED
<b>A Pipe Sewers</b>				
23569 - NCTCP Cont. #1, Force Main in Indiana St. - Olsen	4- 9-75	4-25-77	2,204,458.	295,858.
23541 - NCTCP Cont. #3A, Force Main, Evans to Army - Olsen	7-30-75	92%	944,775.	139,400.
23596 - Bartlett St. 23rd to 24th Sewer Replacement - Nor-Cal	8- 8-75	5-12-77	28,233.	3,233.
23799 - Pier 22 1/2 - Sewer Connection for Fire Boat #1 - Nor-Cal	8-22-75	10- 5-76	24,290.	14,290.
23887 - Barneveld Ave. Sewer Enlargement - Underground	2- 4-76	12-24-76	362,226.	215,526.
23964 - Landsdale Ave Sewer Reconstruction - Vukasin	2-18-76	12-13-76	13,814.	2,814.
23571 - NCTCP #4, Force Main Mariposa To Channel - Kiewit	2-18-76	5- 4-77	1,376,398.	1,160,398.
23902 - Polk St, Sewer Replacement - Depco	2-25-76	7-23-76	53,026.	5,026.
23503 - Alameda St. Florida To Alabama, Sewer - Depco	3-19-76	7-23-76	27,733.	27,733.
23598 - Castro St. 17th To 18th Sewer Enlargement - Jarden	3-26-76	7-22-76	43,353.	5,453.
23959 - Castro St. 26th To Army Sewer Replacement - Depco	6- 9-76	8-27-76	14,716.	14,716.
24006 - Sacramento St. Pierce to Scott, Sewer Replacement - Depco	9-17-76	2-24-77	31,885.	31,885.
23883 - Powell St, Francisco To Lombard Sewer - Kennelly	11-17-76	6-22-77	112,670.	112,670.
23960 - Andover St, Crescent To Newman Sewer - Dalton	11-17-76	2-24-77	67,915.	67,915.
24062 - Park St at Mission St Sewer - Garfney	3-23-77	6- 6-77	6,400.	6,400.
<b>A - Total Awarded &amp; Earned During FY</b>	76-77		\$ 218,870.	\$ 2,103,325.
<b>B Monolithic Sewers</b>				
23935 - Channel OC # C-1 Berry St, 4th to 7th - Caputo	4-29-77	1%	8,897,078.	86,000.
23980 - North SOC #N-3 Bolandero Section - Granite	5-13-77	0%	11,693,705.	0.
23936 - Islais Creek OC - Kiewit	6-15-77	0%	7,057,859.	0.
23968 - Channel OC #C-2 King St. - Olsen	6-17-77	0%	4,685,713.	0.
<b>B - Total Awarded &amp; Earned During FY</b>	76-77		\$32,334,355.	\$ 86,000.
<b>C - Water Pollution Control Plants</b>				
23174 - Hydrologic & Hydraulic Data System - L.F.B.	8-14-70	3-29-77	397,293.	99,663.
23493 - NPWPCP - Outfall Diffusers - Haviside	1- 4-74	99%	577,458.	0.
23558 - SEWPCP - Sedimentation Tank Impr. - A.F.B.	11-29-74	7- 6-76	244,070.	4,070.
23531 - NPWPCP - Chlorination & Dechlorination #2 - McGarry	6- 6-75	4- 1-77	445,432.	161,932.
23702 - SEWPCP Sludge Filtration Cont #4 - Monterey	7-16-75	8-10-76	221,841.	21,841.
23929 - SEWPCP Laboratory Revisions - Goldman	2-25-76	11- 5-76	27,669.	19,369.
23888 - SEWPCP - Dechlorination Facilities - Monterey	6- 9-76	99%	399,731.	396,300.
23877 - SEWPCP - Influent Sampling - Mitchell	7- 7-76	3-17-77	40,272.	40,272.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT RANKED
23893 - SEWPCP - Dechlorination Facility - Mitchell	8-13-76	78%	336,889.	263,600.
23853 - SEWPCP 80' Dia. Digester Imp. - Power-Anderson	9- 1-76	73%	76,800.	56,300.
23958 - SEWPCP Interim Improv. Odor & Ventilation - Monterey	5- 4-77	0%	330,800.	0.
<b>C - Total Awarded &amp; Earned During FY</b>	76-77		\$ 784,161.	\$ 1,063,347.
<b>D - Pumping Stations</b>				
23568 - North PCTP Cont #6 Channel Pump Sta - Cahill	8-27-76	22%	13,219,692.	2,935,500.
<b>D - Total Awarded &amp; Earned During FY</b>	76-77		\$13,219,692.	\$2,935,500.
<b>E - Appointments - B of SE</b>				
92535 - Lake Merced Plant Arch - Hardison	7-12-72	8- 3-76	4,500.	4,500.
95858 - Ocean Toxicity - Seith	7-11-73	8- 6-76	4,297.	0.
96097 - Ocean Toxicity - Newcombe	8- 8-73	8- 4-76	1,446.	696.
96098 - Ocean Toxicity - Wilde	8- 8-73	10- 1-76	2,900.	600.
96100 - Ocean Toxicity - McGahey	8- 8-73	1- 7-77	1,050.	0.
100265 - Revenue Program Prep. - Stone	12-20-74	70%	58,000.	36,422.
100765 - Ocean Toxicity - North	2-14-75	3- 4-77	2,059.	519.
101029 - Indust. Waste Prog. - Chg M-Hill	3-14-75	34%	5,000.	1,716.
101554 - Soils Study - WPC - Dames & Moore	4-30-75	96%	227,400.	111,184.
101777 - Soils Study - WPC - Cooper	5-21-75	97%	90,800.	0.
101960 - Soils Study - WPC - Woodward	6-11-75	97%	144,500.	47,212.
101966 - Soils Study - WPC - Woodward	6-11-75	97%	123,600.	64,165.
102115 - Underwater Inspection - Pen-Marine	6-20-75	1-19-77	22,264.	17,238.
102116 - Soils Study - WPC - Harding	6-20-75	10- 5-76	121,124.	3,109.
102146 - Architectural Design - WPC - Hardison	6-25-75	8- 3-76	5,000.	2,342.
103319 - Transcripts - EIR - Wetchnier	10- 8-75	60%	1,000.	38.
103394 - Repairs at SEWPCP - Hopkins	10-17-75	9-15-76	10,000.	10,000.
103403 - Soils Report - Woodward	10-17-75	83%	119,000.	12,635.
103467 - Repair Hydrologic Data - Airdraulics	10-24-75	2-23-77	4,271.	340.
103550 - Maintain SPFHAR - Honeywell	11- 5-75	11-30-76	30,489.	15,245.
103611 - Welding Inspection - Peabody	11-14-75	6-30-77	162.	0.
104176 - Automatic Control in Sewers - Water Res.	1-28-76	23%	195,000.	37,267.
104234 - Engineering Consultant - Jacobs	2- 4-76	50%	20,000.	6,955.
104248 - Plant Operation - White	2- 6-76	93%	4,500.	4,193.
104271 - Feasibility Study - Harder	2-11-76	19%	5,000.	960.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE CR %	CONTRACT AMOUNT	AMOUNT EARNED
104805 - Contract Prep - Jacobs	3- 3-76	12-30-76	4,738.	1,085.
104869 - Aerial Photographs - Towill	3-10-76	8- 3-76	1,280.	1,280.
104872 - Contract Prep - Jacobs	3-10-76	12-30-76	7,705.	4,431.
104886 - Inspect Welding - Hanks	3-12-76	10-19-76	2,074.	703.
104627 - W.W. Master Plan - Spectrum	3-17-76	2-25-77	3,514.	0.
104641 - WPC Program - Brown & C.	3-19-76	10-12-76	8,982.	8,982.
104702 - Drawings for WSTP - Towill	3-31-76	8-11-76	4,152.	4,152.
104760 - Evaluate Hydrologic Data - Phanartiss	4- 7-76	8%	36,500.	30,904.
104808 - EIR - Sahn	4-14-76	10-22-76	4,069.	2,129.
104841 - Liaison - Clean Water - Gilbert	4-21-76	2-28-77	4,990.	4,990.
104860 - Architectural Survey - Heid	4-21-76	7-20-76	1,178.	1,178.
104886 - TV Sewer Inspection - Aernout	4-28-76	11- 1-76	14,952.	11,185.
104907 - Pump Sta. Model - Hydro	4-28-76	86%	159,103.	132,981.
104951 - Water Poll. Control CH2M-Hill	5- 7-76	12-10-76	5,000.	5,000.
105308 - Test Pipe Coating - Corrosion	5-21-76	6-30-77	754.	754.
105385 - Design Digester - Golden West	5-28-76	11-30-76	4,260.	4,260.
105447 - Design SEWPCP - CH2M-Hill	6- 4-76	62%	4,356,539.	2,689,317.
105578 - Critical Path System - Daniel	6-18-76	85%	612,005.	520,084.
105579 - Archit. Service - WPC - Hardison	6-18-76	65%	1,182,800.	764,870.
105621 - Waste Water Plan - Gilbert	6-25-76	9-17-76	5,000.	5,000.
105633 - Soils Investigation - Deitz & Moore	6-25-76	9- 3-76	4,977.	4,977.
105651 - Design Pump Station - Kennedy	6-30-76	34%	2,076,533.	702,433
105656 - Investigate Ground Water - Corrosion	6-30-76	6-17-77	2,042.	2,042.
105790 - Oceanographic Program - CH2M-Hill	7- 9-76	11-15-76	5,000.	5,000.
105791 - Oceanographic Program - Woodward	7- 9-76	10-19-76	5,000.	5,000.
105793 - Oceanographic Program - FPM&D	7- 9-76	8-12-76	5,000.	5,000.
105871 - Slurry Shield Construction - Jacobs	7-21-76	12-16-76	4,966.	4,966.
105914 - Eng. at RSWPCP - Brown & Caldwell	7-28-76	2-22-77	4,977.	4,977.
106124 - Transcripts WPC - Hotchner	8-13-76	10-19-76	407.	407.
106132 - Oceanographic Study - FPM&D	8-13-76	10-29-76	5,000.	5,000.
106132 - Oceanographic Study - Woodward - C	8-13-76	10-19-76	5,000.	5,000.
106165 - Photos COOP - Towill	8-18-76	9-30-76	500.	500.
106190 - Engineering for RSWPCP - Brown & C	8-20-76	50%	159,436.	78,912.
106191 - Engineering for WWP - FPM&D	8-20-76	11-24-76	5,000.	5,000.
106263 - Repair Sewer - Jardin	8-27-76	10-25-76	2,450.	2,450.
106480 - Repair SPHERAR - Airdraulics	9-17-76	76%	4,000.	3,055.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE CR %	CONTRACT AMOUNT	AMOUNT EARNED
106610 - Design of Southwest Outfall - FPM&D	9-29-76	18%	7,496,900.	1,355,254.
106679 - Consultant RPS Surge Analysis - Fluid Kinetics	10- 6-76	86%	7,064.	6,083.
106723 - Geotechnical Services for NPOT VI - Woodward-Clyde	10- 8-76	53%	5,000.	2,654.
106724 - Welding Inspection for NWPCP - Hanks	10- 8-76	8%	2,000.	160.
106802 - Inspection of RSWPCP Digester - Hunt	10-27-76	97%	1,500.	1,456.
106855 - EIR for WSTP - EIP Corp	10-29-76	1-12-77	4,854.	4,854.
106889 - EIR - WPC - ESA, Inc.	11- 3-76	1-26-77	4,862.	4,862.
106990 - Consult on SEWPCP - ESA, Inc.	11- 3-76	2-10-77	4,209.	4,209.
106992 - Ocean Program - Woodward-C	11-17-76	1-24-77	5,000.	5,000.
107005 - Maintain SPHERAR - Honeywell	11-19-76	16%	33,000.	5,379.
107041 - Waste Water Management - DeLauw	11-26-76	5-23-77	5,000.	5,000.
107055 - EIR for SWWPCP - ESA	12- 1-76	25%	346,222.	87,753.
107057 - EIR for WSTP - EIP	12- 3-76	88%	158,601.	139,682.
107071 - EIR for WSTP - EIP	12- 3-76	2-24-77	5,000.	5,000.
107112 - Minority Contractor - Source Pub.	12- 8-76	2-22-77	5,000.	5,000.
107113 - Review Plans & Specs. - DeLauw	12- 8-76	69%	5,000.	3,470.
107193 - WWM Services - McKee	12-17-76	0%	5,000.	0.
107194 - WWM Services - Greisley	12-17-76	2- 1-77	5,000.	5,000.
107217 - Archaeological Reports - Peak	12-22-76	1-13-77	5,000.	5,000.
107226 - WTP - Design - Hydro Res.	12-24-76	0%	5,000.	0.
107227 - Sandblast at SEWPCP - Stump	12-24-76	2-22-77	240.	240.
107245 - Pilot Plant - Metcalf & Eddy	12-29-76	6- 2-77	5,000.	5,000.
107246 - Wet Weather Flows - Metcalf & Eddy	12-29-76	6-30-77	4,998.	4,998.
107321 - Hydraulic Models - Hydro Res.	1- 7-77	6%	187,000.	11,687.
107328 - Archaeology Consult. - Peak	1- 7-77	1-24-77	5,000.	5,000.
107329 - WWM Services - Public MCA	1- 7-77	6- 7-77	5,000.	5,000.
107357 - Consulting Service - Olmstead	1-12-77	1-24-77	4,984.	4,984.
107392 - Drafting Service - Naltes	1-12-77	56%	24,750.	13,798.
107398 - Consulting Service - Resource Eng.	1-12-77	12%	18,532.	2,178.
107408 - Archaeological Services - Pastron	1-14-77	5-11-77	4,685.	4,685.
107428 - Consulting Service - Jacobs	1-19-77	94%	20,000.	18,783.
107478 - Historical Consultant - Olmstead	1-26-77	5- 2-77	4,987.	4,987.
107479 - Geotechnical Engineering - Harding	1-26-77	27%	10,000.	2,743.
107510 - Underwater Inspection - Pan-Marine	1-28-77	0%	5,000.	0.
107545 - Bayside Site Planning - Gilbert	2- 2-77	10%	99,700.	9,849.

## CURRENT CONTRACT DATA 1976 - 1977

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETION DATE OR %	CONTRACT AMOUNT	AMOUNT EARNED
107845 - Community Work - Dukes	3- 4-77	0%	3,500.	0.
107874 - Inspect Pipe NFWPC - Oregon	3- 9-77	10%	5,000.	516.
107953 - Structural Plans SEWPCF - Chinn	3-16-77	57%	5,000.	2,869.
107966 - Surge Analysis SEEPS - Fluid Kin	3-16-77	6-22-77	1,000.	1,000.
108008 - Beach Erosion Study - Johnson	3-23-77	0%	5,000.	0.
108193 - Bay Discharge Studies Metcalf	4- 6-77	6-30-77	4,983.	4,983.
108194 - Stormwater Studies - Metcalf	4- 6-77	6-30-77	4,998.	4,998.
108215 - Cultural Resources Study - Olstead	4- 8-77	31%	24,897.	7,707.
108234 - Great Highway Plan - Painter	4-13-77	47%	24,900.	11,731.
108268 - Slurry Mole Study - DeLew	4-15-77	0%	5,000.	0.
108332 - Eng. Service SWWPCF - Metcalf	4-27-77	0%	2,656,065.	0.
108522 - Public Participation Study WWM - ESA	5-13-77	0%	5,000.	0.
108568 - Soils Study, NP Pump Sta. - Dances & Moore	5-18-77	0%	5,000.	0.
108638 - Sewer Service Charge - Carollo	5-25-77	0%	5,000.	0.
108649 - Envir. Services - WNP - Env. Sci. Assoc.	5-25-77	0%	19,823.	0.
108667 - Archeologic Services - Pastron	5-27-77	0%	23,184.	0.
108681 - Environmental Service NSOC - Envj Sci. Assoc.	6- 1-77	0%	15,050.	0.
108793 - RR Track Removal - Southern Pac.	6-10-77	6-21-77	66,040.	66,040.
108856 - Archeologic Service - Pastron	6-17-77	0%	24,446.	0.
108859 - Construction Manager - DeLew	6-17-77	0%	4,500,000.	0.
E - Total Awarded & Earned During FY	76-77		\$16,119,710.	\$ 7,244,932.











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